

SLV-E325EG/E475EG/E570EE/E570EG/E715B/E717VC/E720B/E720BZ/E720EE/ E720EG/E720EX/E720NC/E720NP/E720UX/E720VC/E720VP/E725NC RMT-V197N/197AN/197BN/198N/198AN/198KN/198JN/199N/199A

SERVICE MANUAL



Photo : SLV-E720B

VHS

H MECHANISM

- Refer to the SERVICE MANUAL of VHS MECHANICAL ADJUSTMENTS IV for MECHANICAL ADJUSTMENTS. (9-973-623-11)

*East European Model
Greek Model*

SLV-E325EG/E475EG/E570EE/
E570EG/E720EE/E720EG

French Model

SLV-E715B/E720B/E720BZ

Irish Model

SLV-E720EX

North European Model

SLV-E720NC/E725NC

Spanish Model

SLV-E720NP

UK Model

SLV-E720UX

Germany Model

SLV-E717VC/E720VC

*Austrian Model
Germany Model*

SLV-E720VP

SPECIFICATIONS

System

Channel coverage

PAL (B/G)
VHF E2 to E12
VHF Italian channels A to H
UHF E21 to E69
CATV S01 to S05, S1 to S20
HYPER S21 to S41

RF output signal

UHF channels 21 to 69

Aerial out

75-ohm asymmetrical aerial socket

Inputs and outputs

LINE-1 (TV)

LIGNE-1 (TV)

21-pin

Video input: pin 20

Audio input: pins 2 and 6

Video output: pin 19

Audio output: pins 1 and 3

LINE-2 IN/ENTREE LIGNE-2 (SLV-E570EG/E720EX/
E720NC/E720UX/E720VP)
DECODER/LINE-2 IN
DECODEUR/ENTREE LIGNE-2 (SLV-E715B/E717VC/
E720B/E720BZ/E720NP/E720VC)
21-pin
Video input: pin 20
Audio input: pins 2 and 6
Video output: (C+) pin 19 (SLV-E715B/E717VC/
E720B/E720BZ/E720NP/E720VC)
Audio output: (C+) pins 1 and 3 (SLV-E715B/E717VC/
E720B/E720BZ/E720NP/E720VC)

AUDIO OUT

Phono jack (2)

Rated output level: 327 mVrms

Load impedance: 47 kilohms

Output impedance: less than 10 kilohms

General

Power requirements

220 - 240 V AC, 50 Hz

Power consumption

23 W

Operating temperature

5°C to 40°C

Storage temperature

-20°C to 60°C

Dimensions

Approx. 430 x 109 x 304 mm (w/h/d)
including projecting parts and controls

Mass

Approx. 4.8 kg

Supplied accessories

Remote commander (1)

R6 (size AA) batteries (2)

Aerial cable (1)

Design and specifications are subject to change without notice.

VIDEO CASSETTE RECORDER



SONY®

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer.

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
4. Look for parts which, through functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
5. Check the B+ voltage to see it is at the values specified.
6. Flexible Circuit Board Repairing
 - Keep the temperature of the soldering iron around 270°C during repairing.
 - Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
 - Be careful not to apply force on the conductor when soldering

TABLE OF CONTENTS

SERVICE NOTE

1. HOW TO RETURN THE PINCH ROLLER, GUIDE ROLLER AND ELEVATOR CAM TO STOP MODE 4
2. HOW TO RETURN A TAPE INTO CASSETTE HALF ... 4
3. HOW TO REMOVE A CASSETTE FROM A MACHINE IF A CASSETTE IS LEFT IN A MACHINE IN TROUBLE 4
4. HOW TO REMOVE DRUM ASSEMBLY 4

1. GENERAL

- Getting Started 5-1
- Unpacking 15
- Setting up the remote commander 15
- Connecting the VCR 5-1
- Tuning your TV to the VCR 5-1
- Setups – Selecting a language 5-1
- Setups – Presetting channels automatically 1-3
- Setups – Presetting channels manually 1-5
- Setups – Setting up ShowView 1-5
- Setups – Changing/disabling programme positions 1-5
- Setups – Setting the clock 6-1
- Setups – Setting the usage of 2nd Euroconnector (SLV-E720NP/E725NP/E720VC/E717VC only) 1-6
- Setting the PAY-TV/Canal Plus decoder (SLV-E720NP/E725NP/E720VC/E717VC only) 1-7
- Basic Operations 1-8
- Playing a tape 1-8
- Recording TV programmes 1-8
- Recording TV programmes using ShowView 1-8
- Setting the timer manually 1-9
- Additional Operations 1-10
- Playing/searching at various speeds 1-10
- Recording TV programmes using the quick timer 1-10
- Checking/changing/cancelling timer settings 1-10
- Recording stereo and bilingual programmes 1-11
- Searching using the index function 1-11
- Adjusting the picture 6-1
- Changing menu options 1-12
- Editing with another VCR 1-12
- Index to parts and controls 7-13

2. DISASSEMBLY

- 2-1. CASE AND FRONT ASSEMBLY 2-1
- 2-2. FR-119 BOARD (WITH DM-62 BOARD) 2-1
- 2-3. RP-217 BOARD 2-2
- 2-4. MECHANISM DECK ASSEMBLY (H MECHANISM) 2-2
- 2-5. MA-286 AND PS-385 BOARDS 2-3
- 2-6. CIRCUIT BOARDS LOCATION 2-3

3. BLOCK DIAGRAMS

- 3-1. OVERALL BLOCK DIAGRAM 3-1
- 3-2. VIDEO BLOCK DIAGRAM 3-2
- 3-3. SERVO, SYSTEM CONTROL BLOCK DIAGRAM 3-5
- 3-4. AUDIO BLOCK DIAGRAM 3-7
- 3-5. I/O BLOCK DIAGRAM 3-11
- 3-6. TUNER BLOCK DIAGRAM 3-11
- 3-7. MODE CONTROL BLOCK DIAGRAM 3-13
- 3-8. POWER SUPPLY BLOCK DIAGRAM 3-15

4. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

- 4-1. FRAME SCHEMATIC DIAGRAM 4-1
- 4-2. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS 4-4
 - RP-217 (HEAD AMP) PRINTED WIRING BOARD 4-5
 - RP-217 (HEAD AMP) SCHEMATIC DIAGRAM 4-7
 - MA-286 (VIDEO, SERVO/SYSTEM CONTROL, AUDIO, TUNER) PRINTED WIRING BOARD 4-10
 - MA-286 (VIDEO, AUDIO) SCHEMATIC DIAGRAM 4-13
 - MA-286 (SERVO/SYSTEM CONTROL) SCHEMATIC DIAGRAM 4-16

- MA-286 (OSD) SCHEMATIC DIAGRAM 4-19
- MA-286 (TUNER) SCHEMATIC DIAGRAM 4-21
- MA-286 (I/O) SCHEMATIC DIAGRAM 4-23
- DM-62 (OPERATION SWITCHES), FR-119 (MODE CONTROL) PRINTED WIRING BOARDS 4-25
- DM-62 (OPERATION SWITCHES), FR-119 (MODE CONTROL) SCHEMATIC DIAGRAMS 4-27
- PS-385 (POWER SUPPLY) PRINTED WIRING BOARD AND SCHEMATIC DIAGRAM 4-30

5. REPAIR PARTS LIST

- 5-1. EXPLODED VIEWS 5-1
- 5-1-1. FRONT PANEL ASSEMBLY AND CASE 5-1
- 5-1-2. CHASSIS ASSEMBLY 5-1
- 5-1-3. MECHANISM DECK ASSEMBLY-1 5-3
- 5-1-4. MECHANISM DECK ASSEMBLY-2 5-4
- 5-1-5. MECHANISM DECK ASSEMBLY-3 5-5
- 5-1-6. MECHANISM DECK ASSEMBLY-4 5-6
- 5-2. ELECTRICAL PARTS LIST 5-7

6. INTERFACE, IC PIN FUNCTION DESCRIPTION

- 6-1. SYSTEM CONTROL — SERVO PERIPHERAL CIRCUIT INTERFACE (MA-286 BOARD IC160) 6-1
- 6-2. SYSTEM CONTROL — MECHANISM INTERFACE (MA-286 BOARD IC160) 6-2
- 6-3. SYSTEM CONTROL — SYSTEM CONTROL PERIPHERAL CIRCUIT INTERFACE (MA-286 BOARD IC160) 6-2
- 6-4. SYSTEM CONTROL — Hi-Fi AUDIO BLOCK INTERFACE (MA-286 BOARD IC160) 6-3
- 6-5. SERVO/SYSTEM CONTROL MICROPROCESSOR PIN FUNCTIONS (MA-286 BOARD IC160) 6-3
- 6-6. TUNER/TIMER MODE CONTROL PIN FUNCTION (FR-119 BOARD IC470) 6-6

7. ADJUSTMENTS

- 7-1. MECHANICAL ADJUSTMENTS 7-1
- 7-2. ELECTRICAL ADJUSTMENTS 7-1
- 7-1. PREPARATION BEFORE ADJUSTMENT 7-1
 - 7-1-1. Equipment Required 7-1
 - 7-1-2. Equipment Connection 7-1
 - 7-1-3. Input Signal Check 7-1
 - 7-1-4. Alignment Tape 7-2
 - 7-1-5. Input/Output Levels and Impedance 7-2
 - 7-1-6. Adjustment Sequence 7-2
- 7-2. POWER SUPPLY CHECK 7-2
 - 7-2-1. Output Voltage Check (MA-286 Board) 7-2
- 7-3. SERVO SYSTEM CHECK 7-3
 - 7-3-1. RF Switching Position Adjustment (MA-286, RP-217 Boards) 7-3
- 7-4. VIDEO SYSTEM CHECKS AND ADJUSTMENT 7-3
 - 7-4-1. X'tal OSC Check (MA-286 Board) 7-3
 - 7-4-2. SYNC AGC Check (MA-286 Board) 7-4
 - 7-4-3. White Clip/Dark Clip Check (MA-286 Board) 7-4
 - 7-4-4. Recording Y Level Check (MA-286 Board) 7-4
 - 7-4-5. Recording Chroma Level Check (MA-286 Board) 7-4
 - 7-4-6. Playback Level Check (MA-286 Board) 7-5
 - 7-4-7. VCO Frequency Adjustment (MA-286 Board) 7-5
- 7-5. AUDIO SYSTEM ADJUSTMENT 7-5
 - 7-5-1. ACE Head Adjustment 7-5
 - 7-5-2. E-E Output Level Check 7-5
 - 7-5-3. Overall Output Level and Distortion Factor Check 7-5
 - 7-5-4. Overall Noise Level Check 7-5
- 7-6. ADJUSTMENT PARTS LOCATION DIAGRAM 7-6

SERVICE NOTE

1. HOW TO RETURN THE PINCH ROLLER, GUIDE ROLLER AND ELEVATOR CAM TO STOP MODE

- 1) Remove the VHS MD assembly from the machine. (Refer to section 2-4. Removal.)
- 2) Rotate the worm gear-1 of the cam motor beneath the MD assembly in the direction arrow **A** using a screw driver tip.

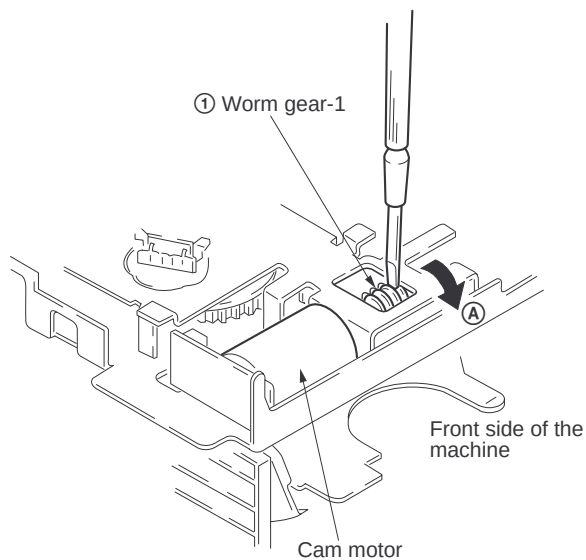


Fig. 1

2. HOW TO RETURN A TAPE INTO CASSETTE HALF

A tape can be rewound into a cassette half by rotating the flywheel-1 of the capstan motor in the direction of **A** with hand.

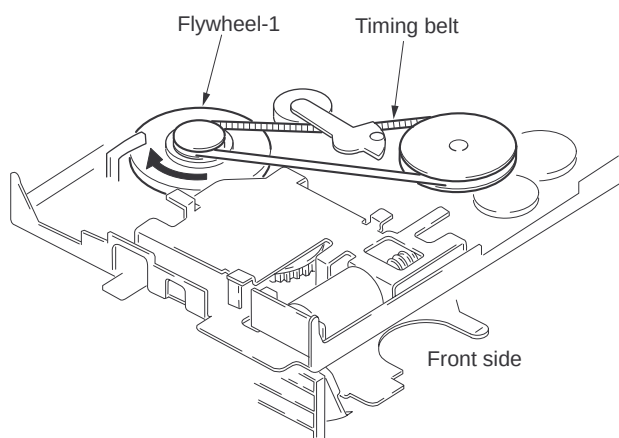


Fig. 2

3. HOW TO REMOVE A CASSETTE FROM A MACHINE IF A CASSETTE IS LEFT IN A MACHINE IN TROUBLE

Execute the section 2, and keep rotating the flywheel-1.

When executing section 1 to 3, take care that a tape slack should not be caught by a mechanism or a tape should not be damaged.

4. HOW TO REMOVE DRUM ASSEMBLY

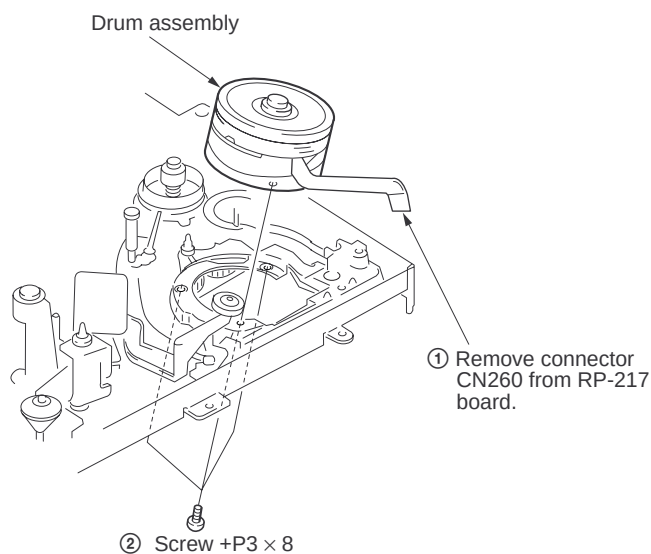


Fig. 3

SECTION 1 GENERAL

This section is extracted
from instruction manual.

Getting Started

Step 1

Unpacking

Check that you have received the following items with the VCR:

- Remote commander



- Aerial cable

- R6 (size AA) batteries



Checking your model name

The instructions in this manual are for the 6 models: SLV-E720NC, E720NP, E720VC, E720VP, E725NP and E717VC. Check your model number by looking at the rear panel of your VCR. The SLV-E720NP is the model used for illustration purposes. Any difference in operation is clearly indicated in the text, for example, "SLV-E720VC only."

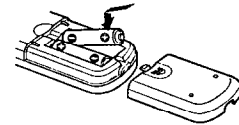
4 Getting Started

Step 2

Setting up the remote commander

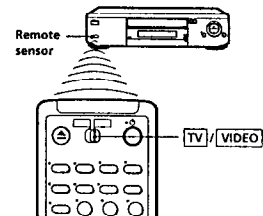
Inserting the batteries

Insert two R6 (size AA) batteries by matching the + and - on the batteries to the diagram inside the battery compartment.



Using the remote commander

You can use this remote commander to operate this VCR and a Sony TV. Buttons on the remote commander marked with a dot (•) can be used to operate your Sony TV.



To operate	Set [TV/VIDEO] to
the VCR	[VIDEO] and point at the remote sensor on the VCR
a Sony TV	[TV] and point at the remote sensor on the TV

Using the Joystick

Mode	Operation	Action
Playback	Push up/down/left/right ↑/↓/←/→	PAUSE/STOP/FF/REW
	Press	PLAY
Menu	Push up/down/left/right ↑/↓/←/→	Select in menu
	Press	EXECUTE

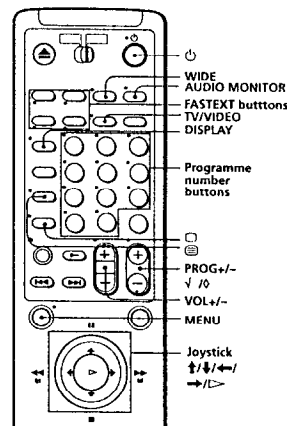
Notes

- In normal use, the batteries should last about three to six months.
- If you do not use the remote commander for an extended period of time, remove the batteries to avoid possible damage from battery leakage.
- Do not use a new battery with an old one.
- Do not use together different types of batteries.

continued

Getting Started 5

Step 2 : Setting up the remote commander (continued)



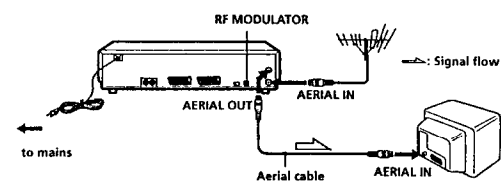
TV control buttons

To	Press
Turn the TV into standby or active mode	⏻ (on/standby)
Select an input source of the TV either from aerial or from line in	TV/VIDEO
Select the programme position of the TV	Programme number buttons PROG +/- √ / 0
Adjust the volume of the TV	VOL +/-
Switch to TV (Teletext off)	□ (TV)
Switch to Teletext	Ⓜ (Teletext)
Select the sound	AUDIO MONITOR
Use FASTTEXT	FASTTEXT buttons
Call up on-screen display	DISPLAY
Change the Teletext page	√ / 0
Operate TV menu options	MENU button / Joystick
Select screensize	WIDE

6 Getting Started

Step 3

Connecting the VCR



- 1 Disconnect the aerial cable from your TV and connect it to AERIAL IN on the rear panel of the VCR.
- 2 Connect AERIAL OUT of the VCR and the aerial input of your TV using the supplied aerial cable.
- 3 RF MODULATOR Make sure RF MODULATOR is set to ON.
- 4 Connect the mains lead to the mains

continued

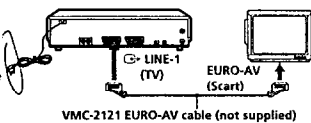
Getting Started 7

Step 3 : Connecting the VCR (continued)

Additional connections

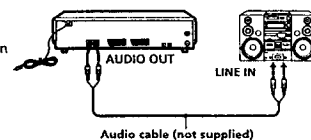
To a TV that has a EURO-AV (Scart) connector

This additional connection improves picture and sound quality. Connect the TV as shown on the right. Whenever you want to watch the VCR picture, press TV/VIDEO to display the VTR indicator in the display window.



To a stereo system

You can improve sound quality by connecting a stereo system as shown on the right.



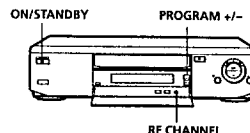
Tip

- If the TV is connected to the LINE-1 (TV) connector, setting the RF MODULATOR switch to OFF is recommended. In the OFF position, only the signal from the aerial is output through the AERIAL OUT connector.

Step 4

Tuning your TV to the VCR

If you have connected your VCR to the TV using a EURO-AV cable, skip this step.



- Press ON/STANDBY to turn on the VCR. Make sure that the RF MODULATOR switch on the rear panel is set to ON.
- Press RF CHANNEL on the VCR. The factory-preset RF channel appears in the display window. The VCR signal is output through this channel to the TV.



- Turn on your TV and select a programme position for the VCR picture. This channel (32) will now be referred to as the video channel.
- Tune the TV to the same channel as the one shown in the display window so that the picture on the right appears on the TV screen (background must be green). Refer to your TV manual for tuning instructions. If the picture does not appear clearly, see "To obtain a clear picture from the VCR" on the next page.



continued

Getting Started 9

8 Getting Started

Step 4 : Tuning your TV to the VCR (continued)

- Press RF CHANNEL. You have now tuned your TV to the VCR. From now on, whenever you want to play a tape, set the TV to the video channel.

To check if the TV tuning is correct

If a number on the TV screen changes each time you press PROGRAM +/- on the VCR, the TV tuning is correct.

To obtain a clear picture from the VCR

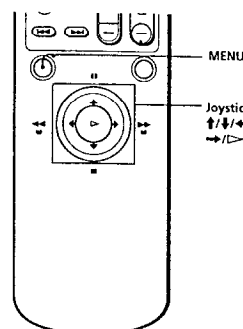
If the picture does not appear clearly in step 4 above, press PROGRAM +/- in step 4, so that another RF channel appears. Then tune the TV to the new RF channel until a clear picture appears.

Setups — Selecting a language

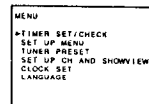
You can change the on-screen display language from the factory one.

Before you start...

- Turn on the VCR and the TV.
- Set the TV to the video channel.



- Press MENU. The menu screen appears.
- Push Joystick up/down to move the cursor (P) to LANGUAGE and press Joystick. The language selection screen appears.
- Push Joystick up/down to select the desired language with the dot (●), then press Joystick. The selected language is displayed.



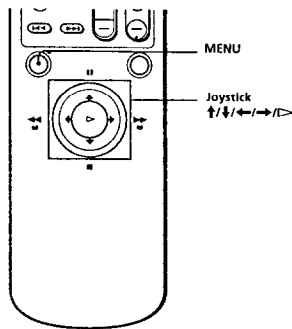
Getting Started 11

10 Getting Started

Setups — Presetting channels automatically

Before you start...

- Turn on the VCR and the TV.
- Set the TV to the video channel.



- 1 Press MENU, then push Joystick $\uparrow/\downarrow$ to move the cursor ($\blacktriangleright$) to TUNER PRESET and press Joystick.



TUNER PRESET	PROG14
NORMAL/CATV	NORM CATV
AUTO PRESET	
CHANNEL SET	CHS ON/OFF
PATTV/CANAL	ON/OFF
AFT	ON/OFF
FINE TUNING	

- 2 Push Joystick $\uparrow/\downarrow$ to move the cursor ($\blacktriangleright$) to AUTO PRESET, then press Joystick.
The AUTO TUNING PRESET starts searching and allocates the first channels found at the first positions.
If you want to change the order or to disable some channels, you can do it in the SET UP CH AND SHOWVIEW menu (page 16)



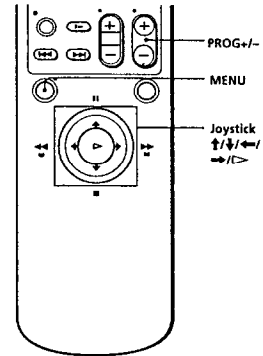
TUNER PRESET	PROG14
NORMAL/CATV	NORM CATV
AUTO PRESET	
CHANNEL SET	CHS ON/OFF
PATTV/CANAL	ON/OFF
AFT	ON/OFF
FINE TUNING	

Setups — Presetting channels manually

You can also preset one or several channels manually.

Before you start...

- Turn on the VCR and the TV.
- Set the TV to the video channel.



- 1 Press MENU, then push Joystick $\uparrow/\downarrow$ to move the cursor ($\blacktriangleright$) to TUNER PRESET and press Joystick.



e.g. SLV-E720NP/E725NP/
E720VC/E717VC

TUNER PRESET	PROG14
NORMAL/CATV	NORM CATV
AUTO PRESET	
CHANNEL SET	CHS ON/OFF
PATTV/CANAL	ON/OFF
AFT	ON/OFF
FINE TUNING	

- 2 Push Joystick $\uparrow/\downarrow/\leftarrow/\rightarrow$ to move the cursor ($\blacktriangleright$) to NORMAL/CATV, then select NORM.
To preset CATV channels, select CATV.



TUNER PRESET	PROG14
NORMAL/CATV	NORM CATV
AUTO PRESET	
CHANNEL SET	CHS ON/OFF
PATTV/CANAL	ON/OFF
AFT	ON/OFF
FINE TUNING	

- 3 Push Joystick $\uparrow/\downarrow$ to move the cursor ($\blacktriangleright$) to CHANNEL SET.



TUNER PRESET	PROG14
NORMAL/CATV	NORM CATV
AUTO PRESET	
CHANNEL SET	CHS ON/OFF
PATTV/CANAL	ON/OFF
AFT	ON/OFF
FINE TUNING	

continued

12 | Getting Started

Getting Started | 13

Setups-Presetting channels manually (continued)

- 4 Press PROG +/- to select the programme position you want to set up.



Selected programme position

TUNER PRESET	PROG14
NORMAL/CATV	NORM CATV
AUTO PRESET	
CHANNEL SET	CHS ON/OFF
PATTV/CANAL	ON/OFF
AFT	ON/OFF
FINE TUNING	

- 5 Push Joystick $\rightarrow$ to start tuning.
The VCR starts searching for a channel and displays the first one it finds on the TV screen. Push Joystick $\leftarrow/\rightarrow$ repeatedly until the channel you want is displayed.



Channels are scanned in the following order:

- VHF E2 - E12
- VHF Italian channels A - H
- UHF E21 - E69
- CATV S1 - S20
- HYPER S21 - S41
- CATV S01 - S05

TUNER PRESET	PROG14
NORMAL/CATV	NORM CATV
AUTO PRESET	
CHANNEL SET	CHS ON/OFF
PATTV/CANAL	ON/OFF
AFT	ON/OFF
FINE TUNING	

If you know the number of the channel you want, press the programme number buttons. For example, for channel 5, first press "0" and then press "5."

- 6 To allocate another channel to another programme position, repeat steps 4 and 5.

- 7 Press Joystick.



Disabling unwanted programme positions

After tuning the TV channels, you can disable unused programme positions. The disabled positions will be skipped later when you press the PROG +/- buttons. You can also disable unwanted programme positions using the SET UP CH AND SHOWVIEW menu (page 22).

- 1 In step 5 above, press programme number button "0" twice to display the number "00" beside CHANNEL SET.
- 2 Press Joystick.

If the picture is not clear

Normally, the Auto Fine Tuning (AFT) function automatically tunes in channels clearly. However, if the picture is not clear, you may also use the manual tuning function.

- 1 Press PROG +/- to select the programme number for which you cannot obtain a clear picture.
- 2 Press MENU, then select TUNER PRESET and press Joystick.
- 3 Select FINE TUNING. The fine tuning meter appears.

Selected programme position

TUNER PRESET	PROG14
NORMAL/CATV	NORM CATV
AUTO PRESET	
CHANNEL SET	CHS ON/OFF
PATTV/CANAL	ON/OFF
AFT	ON/OFF
FINE TUNING	

- 4 Push Joystick $\leftarrow/\rightarrow$ to get a clearer picture, then press Joystick.
Note that the AFT (Auto Fine Tuning) setting switches to OFF.

Note

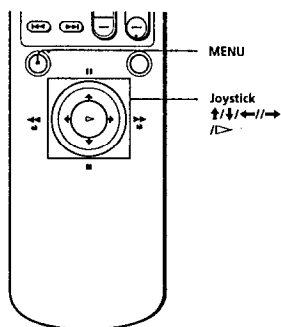
- The menu disappears automatically if you don't proceed for more than a few minutes.

14 | Getting Started

Getting Started | 15

Setups — Setting up ShowView

ShowView is a feature in Sony VCRs that simplifies timer recording setting. To use ShowView, each programme position needs to be matched with its ShowView guide channel. To get the guide channel numbers, look in the programme guide for your area that features ShowView numbers.



- If you want to record satellite broadcasts using ShowView, see page 18.

Before you start...

- Turn on the VCR and the TV.
- Set the TV to the video channel.

- Press MENU, then push Joystick $\uparrow/\downarrow$ to move the cursor (►) to SET UP CH AND SHOWVIEW and press Joystick.

The preset channels are displayed on the screen. "—" in the GUIDE CH column means that the guide channel has not been preset.

SET UP CH AND SHOWVIEW		
PROG	CH	GUIDE CH
1	602	---
2	612	---
3	621	---
4	688	---
5	---	---
SELECT	9 8	
MOVE PROG	→	
ERASE PROG	TIMER CLEAR	
- Push Joystick $\uparrow/\downarrow$ to move the cursor (►) to the row on which you want to set the guide channel.

To display other pages for programme positions 6 to 60, push Joystick $\uparrow/\downarrow$ repeatedly.

SET UP CH AND SHOWVIEW		
PROG	CH	GUIDE CH
1	602	---
2	612	---
3	621	---
4	688	---
5	---	---
SELECT	9 8	
MOVE PROG	→	
ERASE PROG	TIMER CLEAR	

- Push Joystick $\Rightarrow$ twice to select the guide channel column (this is flashing).

SET UP CH AND SHOWVIEW		
PROG	CH	GUIDE CH
1	602	---
2	612	---
3	621	---
4	688	---
SELECT	9 8	
MOVE PROG	→	
ERASE PROG	TIMER CLEAR	
- Push Joystick $\uparrow/\downarrow$ to select the guide channel number assigned in the programme guide.

SET UP CH AND SHOWVIEW		
PROG	CH	GUIDE CH
1	602	---
2	612	---
3	621	---
4	688	---
SELECT	9 8	
MOVE PROG	→	
ERASE PROG	TIMER CLEAR	
- Push Joystick $\Leftarrow/\Rightarrow$ to confirm the setting.

The cursor (►) appears in the leftmost column.

SET UP CH AND SHOWVIEW		
PROG	CH	GUIDE CH
1	602	---
2	612	---
3	621	---
4	688	---
SELECT	9 8	
MOVE PROG	→	
ERASE PROG	TIMER CLEAR	
- To set the guide channel of another station, repeat steps 2 to 5.

If you want to change the programme positions of the stations, proceed to step 2 of "Setups—Changing/disabling programme positions" on page 20.
- Press Joystick.

Getting Started

16 | Getting Started

continued
Getting Started | 17

Setups -Setting up ShowView (continued)

Setting up ShowView for satellite broadcasts

If your satellite tuner is connected via the AERIAL IN connector, first you have to set a programme position for each satellite channel using the TUNER PRESET menu. Then set the guide channel number for each satellite channel using the SET UP CH AND SHOWVIEW menu.

If your satellite tuner is connected via the LINE-2 (TV) connector, you don't have to set programme positions nor guide channel numbers for satellite channels. Skip the following operations.

- Turn on the satellite tuner.
- Press MENU, then select TUNER PRESET and press Joystick.
- Press PROG +/- to select a programme position you want to use for recording or watching a satellite channel.
- Select CHANNEL SET, then push Joystick $\Rightarrow$ to tune the VCR to the satellite tuner.

The channel number displayed beside CHANNEL SET is used for receiving all satellite broadcasts from the satellite tuner.

Please remember this number for the following steps

TUNER PRESET	PROG 14
NORMAL CATV	NORM CATV
AUTO PRESET	
CHANNEL SET	CH
PATTV/CANAL	ON OFF
ATT	ON OFF
FINE TUNING	

- Press PROG +/- to select another programme position for another satellite channel, and press the programme number buttons to enter the same channel number as the one displayed in step 4. Otherwise the setting will not be memorized.
- Repeat this step for all satellite channels, then press Joystick.
- Set the guide channel number for each programme position assigned to the satellite channel, following the procedures in "Setups—Setting up ShowView" on page 16.

Notes

- The menu disappears automatically if you don't proceed for more than a few minutes.
- If you use a satellite tuner connected via the LINE-2 (TV) connector, you don't have to set up ShowView. Just record a satellite programme using ShowView, and the VCR automatically records the programme from the LINE-2 (TV) connector. For the SLV-E720NC/E720VP, use only the LINE-2 IN connector for recording with ShowView.

- If you inadvertently entered a guide channel number, push Joystick $\uparrow/\downarrow$ repeatedly to reset the "GUIDE CH" column to "—." "—" appears between 1 and 255.
- The VCR does not allow entering the guide channel number, if the same number already has been set.
- When you record a satellite broadcast using ShowView, you need to select manually the desired channel on the satellite tuner.

Getting Started

18 | Getting Started

Getting Started | 19

Setups — Changing/disabling programme positions

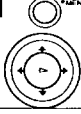
After setting programs and ShowView guide channels, you can change programme positions as you like. If any programme positions are unused or contain unwanted channels, you can disable them.

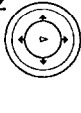
Before you start...

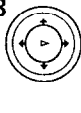
- Turn on the VCR and the TV.
- Set the TV to the video channel.

Changing programme positions

e.g. Moving the programme position from 4 to 2

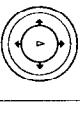
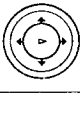
-  Press MENU, then push Joystick $\uparrow/\downarrow$ to move the cursor ($\blacktriangleright$) to SET UP CH AND SHOWVIEW and press Joystick.

SET UP CH AND SHOWVIEW		
PROG	CH	GUIDE CH
1	602	...
2	612	...
3	621	...
4	689	...
5	...	...
-  Push Joystick $\uparrow/\downarrow$ to move the cursor ($\blacktriangleright$) to the row on which you want to change the programme position, then push Joystick $\rightarrow$.
(To display other pages for programme positions 6 to 60, push Joystick $\uparrow/\downarrow$ repeatedly).

SET UP CH AND SHOWVIEW		
PROG	CH	GUIDE CH
1	602	...
2	612	...
3	621	...
4	689	...
5	...	...
-  Push Joystick $\uparrow/\downarrow$ until the selected channel and guide channel row moves to the desired programme position.
The selected channel and guide channel are inserted at the new programme position and the intermediate channels are displaced to fill the gap.

SET UP CH AND SHOWVIEW		
PROG	CH	GUIDE CH
1	602	...
2	689	...
3	612	...
4	621	...
5	...	...

20 | Getting Started

-  Push Joystick $\leftarrow$ to confirm the setting.
- To change the programme position of another station, repeat steps 2 to 4.
-  Press Joystick.

Getting Started

continued

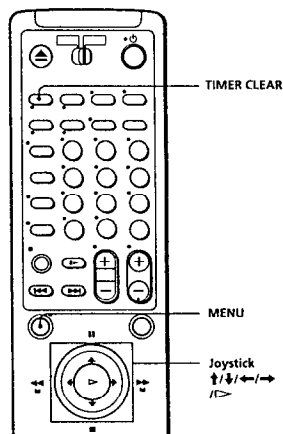
Getting Started | 21

Setups-Changing/disabling programme positions (continued)

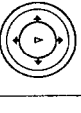
Disabling unused programme positions

Note

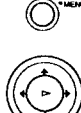
- Be sure to select correctly the programme position you want to disable. If you disable a programme position by mistake, you need to reset that channel manually.

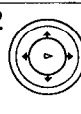


-  Press TIMER CLEAR.
The selected row will be cleaned as shown on the right.

SET UP CH AND SHOWVIEW		
PROG	CH	GUIDE CH
1	602	...
2	612	...
3	621	...
4	689	...
5	...	...
- Repeat steps 2 and 3 for any other programme positions you want to disable.
-  Press Joystick.

Getting Started

-  Press MENU, then push Joystick $\uparrow/\downarrow$ to move the cursor ($\blacktriangleright$) to SET UP CH AND SHOWVIEW and press Joystick.

SET UP CH AND SHOWVIEW		
PROG	CH	GUIDE CH
1	602	...
2	612	...
3	621	...
4	689	...
5	...	...
-  Push Joystick $\leftarrow$ to move the cursor ($\blacktriangleright$) to the row you want to disable.

SET UP CH AND SHOWVIEW		
PROG	CH	GUIDE CH
1	602	...
2	612	...
3	621	...
4	689	...
5	...	...

22 | Getting Started

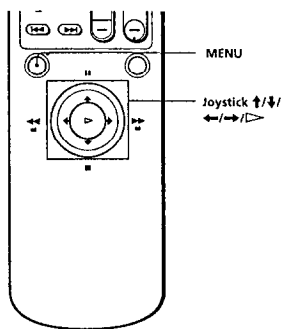
Getting Started | 23

Setups — Setting the clock

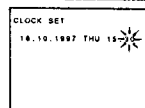
You must set the time and date properly on the VCR to be able to use the timer recording features.

Before you start...

- Turn on the VCR and the TV.
- Set the TV to the video channel.



- 4 Set the year, hour and minutes in sequence, using Joystick → to select the item to be set, and push Joystick ↑/↓ to select the digits.



- 5 Press Joystick to confirm and start the clock.



Tip

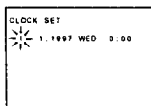
- To change the digits during setting, push Joystick ← to return to the item to be changed, and select the digits using Joystick ↑/↓.

Note

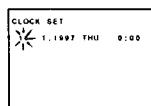
- The menu disappears automatically if you don't proceed for more than a few minutes.

Getting Started

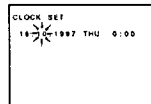
- 1 Press MENU, then push Joystick ↑/↓ to move the cursor (▶) to CLOCK SET and press Joystick.



- 2 Push Joystick ↑/↓ to set the date. The day of the week is set automatically.



- 3 Push Joystick → to select the month and set the month using Joystick ↑/↓.

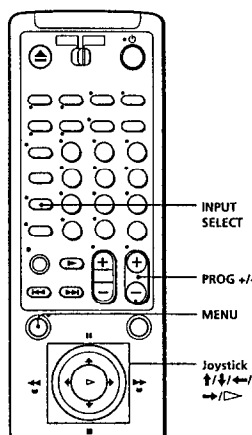


24 | Getting Started

Getting Started | 25

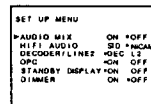
Setups — Setting the usage of 2nd Euroconnector (SLV-E720NP/E725NP/ E720VC/E717VC only)

You can use the 2nd Euroconnector either as an Input (for ex. connect a satellite tuner) or to connect a decoder (Canal + / Pay-TV).

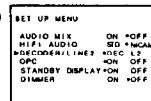


Selection

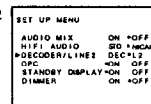
- 1 Press MENU, then push Joystick ↑/↓ to move the cursor (▶) to SET UP MENU and press Joystick.



- 2 Push Joystick ↑/↓ to move the cursor (▶) to DECODER/LINE 2.



- 3 Push Joystick ←/→ to select DEC or L2 with the dot (●), then press Joystick.



Operation

If you select L2:

When you press PROG +, the programme positions change as follows:

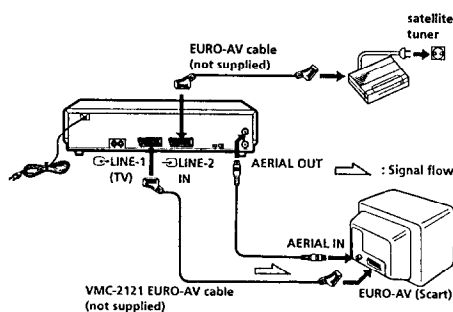
3→4→...59→L1→L2→1→2

or when you press PROG -:

3→2→1→L2→L1→59....

You may connect another VCR, satellite tuner or camcorder into LINE 2 connector

For ex:



For using this kind of connection, you have to press INPUT SELECT or PROG +/- so that "L2" lights in the display window.

Note

- "L2" disappears after a few seconds.
- If DEC has been selected in SET UP MENU, the VCR will not function if it is connected to L2.

If you select DEC:

When you press PROG +, the programme positions change as follows:

1→2→...59→L1→L2→1→2

or: 2→1→L1→59....2→1

Getting Started

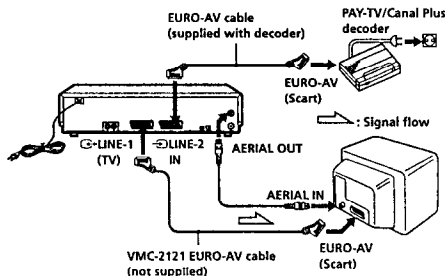
26 | Getting Started

Getting Started | 27

Setting the PAY-TV/Canal Plus decoder (SLV-E720NP/E725NP/E720VC/E717VC only)

You can watch or record PAY-TV/Canal Plus programmes if you connect a decoder (not supplied) to the VCR.

Connecting a decoder

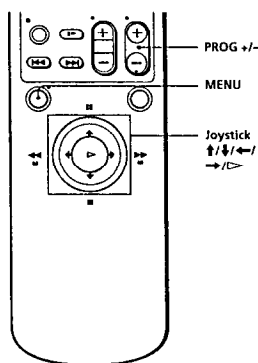


Setting PAY-TV/Canal Plus channels

To watch or record PAY-TV/Canal Plus programmes, proceed as follows:

Before you start...

- Turn on the VCR and the TV.
- Set the TV to the video channel.



- 1 Turn on your decoder.
- 2 Press MENU, then push Joystick $\uparrow/\downarrow$ to move the cursor ($\rightarrow$) to TUNER PRESET and press Joystick.

e.g. SLV-E720NP/E725NP

TUNER PRESET	PROG 14
NORMAL/CATV	*NORM CATV
AUTO PRESET	*ON
*CHANNEL SET	*25
PATV/CANAL	ON/OFF
AFT	ON/OFF
FINE TUNING	ON/OFF

- 3 Press PROG +/- to select the desired programme position.

TUNER PRESET	PROG 3
NORMAL/CATV	*NORM CATV
AUTO PRESET	*ON
*CHANNEL SET	*25
PATV/CANAL	ON/OFF
AFT	ON/OFF
FINE TUNING	ON/OFF

- 4 Push Joystick $\uparrow/\downarrow$ to move the cursor ($\rightarrow$) to CHANNEL SET, then tune in the PAY-TV/Canal Plus channels.

TUNER PRESET	PROG 15
NORMAL/CATV	*NORM CATV
AUTO PRESET	*ON
*CHANNEL SET	*25
PATV/CANAL	ON/OFF
AFT	ON/OFF
FINE TUNING	ON/OFF

- 5 Push Joystick $\uparrow/\downarrow/\leftarrow/\rightarrow$ to move the cursor ($\rightarrow$) to PAY-TV/CANAL PLUS (SLV-E720NP/E725NP/SLV-E720VC/E717VC), then select ON.

TUNER PRESET	PROG 15
NORMAL/CATV	*NORM CATV
AUTO PRESET	*ON
*CHANNEL SET	*25
PATV/CANAL	ON/OFF
AFT	ON/OFF
FINE TUNING	ON/OFF

- 6 Press Joystick.

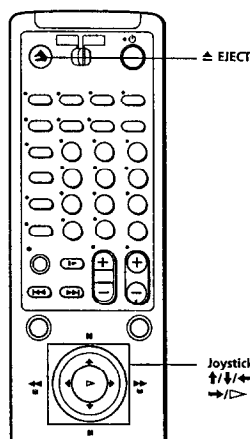
continued

Getting Started 29

28 Getting Started

Basic Operations

Playing a tape



- 1 Turn on your TV and set it to the video channel.
- 2 Insert a tape.
The VCR turns on and starts playing automatically if you insert a tape with its safety tab removed (page 34).
- 3 Press Joystick to $\rightarrow$ PLAY.
When the tape reaches the end, it will rewind automatically.

continued

Basic Operations 31

Playing a tape (continued)

Additional tasks

To	Operation
Stop play	Push Joystick $\downarrow$ to $\blacksquare$ STOP
Pause play	Push Joystick $\uparrow$ during playback to $\blacksquare$ PAUSE
Resume play after pause	Press Joystick or push $\uparrow$ to $\blacksquare$ PAUSE
Search forward	Push Joystick $\rightarrow$ to $\rightarrow$ during playback
Search backward	Push Joystick $\leftarrow$ to $\leftarrow$ during playback
Fast-forward the tape	Push Joystick $\rightarrow$ to $\rightarrow$ FF during stop
Rewind the tape	Push Joystick $\leftarrow$ to $\leftarrow$ REW during stop
Eject the tape	Press $\triangle$ EJECT

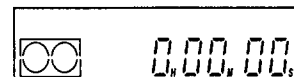
To play an NTSC-recorded tape

Set NTSC PB switch at the rear of the VCR according to the colour system of your TV.

When your TV is	Set NTSC PB to
PAL only	ON PAL TV
PAL and NTSC	NTSC 4.43

To use the time counter

At the point on the tape that you want to find later, press COUNTER RESET. The counter in the display window resets to "0H00M00S." Search for the point afterwards by referring to the counter.



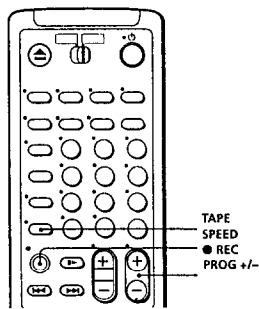
To display the counter on the TV screen, press DISPLAY.

Notes

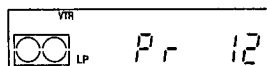
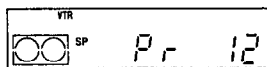
- Depending on your TV, the following may occur while playing an NTSC-recorded tape:
 - The picture becomes black and white.
 - The picture shakes.
 - No picture appears on the TV screen.
 - Black streaks appear horizontally on the TV screen.
 - The colour density increases or decreases.
- If you play back a tape in LP or EP mode with NTSC system, the sound is heard in monaural.
- The counter resets to "0H00M00S" whenever a tape is reinserted.
- The counter stops counting when it comes to a portion with no recording.

32 Basic Operations

Recording TV programmes



- 1 Turn on your TV and set it to the video channel.
To record from a decoder, turn it on (SLV-E720NP / E725NP / E720VC / E717VC only).
- 2 Insert a tape with its safety tab in place.
- 3 Press PROG +/- to select the programme position you want to record.
- 4 Press TAPE SPEED to select the tape speed, SP or LP.
LP (Long Play) provides recording time twice as long as SP (Standard Play), however, SP produces better picture and audio quality.
- 5 Press to start recording.



continued

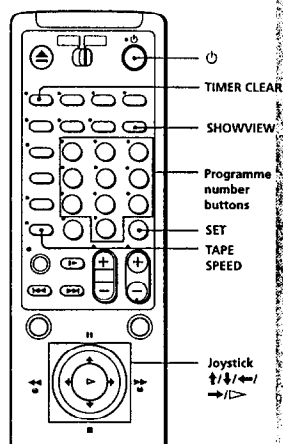
Basic Operations 33

Recording TV programmes using ShowView

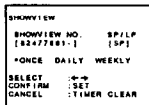
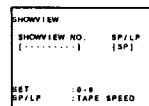
Just enter the programme's ShowView number listed in the TV programme guide. The date, times and programme position of that programme are set automatically. You can preset up to eight programmes at a time.

Before you start...

- Check that the VCR clock is set to the correct time.
- Insert a tape with its safety tab in place. Make sure the tape is longer than the total recording time.
- Turn on your TV and set it to the video channel.



- 1 Press SHOWVIEW.
- 2 Press the programme number buttons to enter the programme's ShowView number.
If you make a mistake, press TIMER CLEAR and re-enter the correct number.



continued

Basic Operations 35

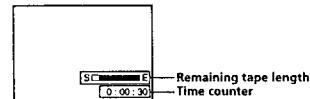
Recording TV programmes (continued)

To stop recording

Push Joystick to STOP.

To check the remaining tape length

Press DISPLAY. 30 seconds after, the white bar indicates the approximate length of tape remaining.



To watch another TV programme while recording

- 1 Press TV/VIDEO to turn off the VTR indicator in the display window.
- 2 Select another programme position on the TV.

To save a recording

To prevent accidental erasure, break off the safety tab as illustrated. To record on a tape again, cover the tab hole with adhesive tape.



Tips

- To select a programme position, you can use the programme number buttons on the remote commander. For two-digit numbers, press the - / - (ten's digit) button followed by the programme number buttons.
- You can select a video source from the LINE-1 (TV) connector or the LINE-2 IN connector using INPUT SELECT.
- The display appears on the TV screen indicating information about the tape, but the information won't be recorded on the tape.
- If you don't want to watch TV while recording, you can turn off the TV. When using a decoder, make sure to leave it on (SLV-E720NP / E725NP / E720VC / E717VC only).

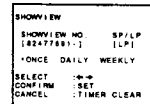
Notes

- The display does not appear during still (pause) mode or slow-motion playback.
- You cannot watch a PAY-TV/Canal Plus programme while recording another PAY-TV/Canal Plus programme (SLV-E720NP / E725NP / E720VC / E717VC only).

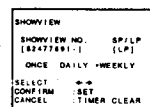
34 Basic Operations

Recording TV programmes using ShowView (continued)

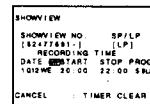
- 3 Press TAPE SPEED to select SP or LP.



- 4 Push the Joystick to select ONCE, DAILY or WEEKLY:



- 5 Press SET button
The date, start and stop times, programme position, and tape speed appear on the TV screen.
For SLV-E720 VC, "V/P" appears automatically.
If you want to turn on/off the VPS/PDC function, see page 44 and change the TIMER SET/CHECK menu.
If the information is not correct, press TIMER CLEAR to cancel the setting.



- 6 To enter another setting, repeat steps 1 to 5.

- 7 Press to turn off the VCR.
The TIMER indicator appears in the display window and the VCR stands by for recording.

36 Basic Operations

To stop the VCR while recording, push Joystick to **■ STOP**.

If you connect the satellite tuner and the VCR, you can record satellite programmes.

- 1 Turn on the satellite tuner.
- 2 On the satellite tuner, select the satellite programme for which you wish to make a timer setting.
- 3 Repeat the steps described above.
- 4 Keep the satellite tuner turned on until the VCR finishes recording the satellite programme for which you have made a timer setting.

To use the VCR before a timer recording begins, just press . The TIMER indicator turns off and the VCR switches on. Remember to press to reset the VCR after using the VCR.

You can also do the following tasks while the VCR is recording:

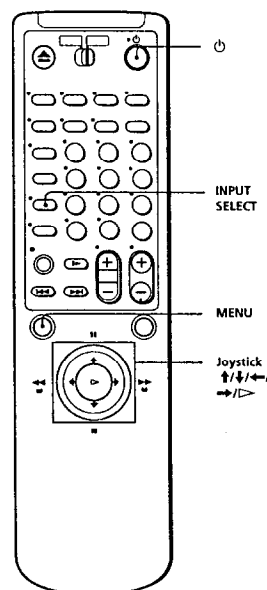
- Reset the counter.
- Display tape information on the TV screen.
- Check the timer settings.
- Watch another TV programme.

- To cancel the Show View procedure, press **SHOWVIEW** before pressing **SET**.

If ShowView is not available in your area, follow the instructions below to set the timer to record programmes.

- Check that the VCR clock is set to the correct time.

- Insert a tape with its safety tab in place. Make sure the tape is longer than the total recording time.
- Turn on your TV and set it to the video channel.
- To record from a decoder, turn it on (SLV-E720NP/E725NP/E720VC/E717VC only).



- 1**  **MENU** Press MENU and select TIMER SET/CHECK, then press joystick.



```
TIMER SET/CHECK 18.07
DATE 02 START STOP PHO
P... ..-... ..
... ..-... ..
... ..-... ..
... ..-... ..
... ..-... ..
... ..-... ..
... ..-... ..
... ..-... ..
```

Basic Operations 37

38 | Basic Operations

2.  Set the date, VPS/PDC function, start and stop times, programme position, and tape speed:
 - 1 Push Joystick $\Rightarrow$ to select each item in turn. (flash)
 - 2 Push Joystick $\uparrow/\downarrow$ to set each item.
 To correct a setting, push Joystick $\Leftarrow$ to return to that setting and reset.
 To record the same programme every day or the same day every week, push Joystick $\downarrow$ while the date is selected. For details, see "Daily/weekly recording" on page 40.
 If you don't want to use the VPS/PDC function, push Joystick $\uparrow/\downarrow$ to turn off $[V/P]$ in the $[I/V/P]$ position. For details, see "Timer recording with VPS/PDC signals" on page 40.
 To record from an other source connected to the LINE-1 (TV) connector (or the LINE-2 IN connector), press INPUT SELECT to display "L1" (or "L2") in the "PROG" position.
 3.  Push Joystick $\Rightarrow$ to confirm the setting.
 The cursor ($\blacktriangleright$) appears at the top of the line. To enter another setting, move the cursor to the next line and repeat step 2.
 4.  Press Joystick.
 The cursor ($\blacktriangleright$) appears at the top of the line. To enter another setting, move the cursor to the next line and repeat step 2.
 5.  Press  to turn off the VCR.
 The TIMER indicator appears in the display window and the VCR stands by for recording.
 To record from an other source, leave the connected equipment switched on.

To stop the VCR while recording, push Joystick to ■ STOP.

continued

Basic Operations 39

Daily/weekly recording

In step 2 above, push Joystick to select the recording pattern. Each time you push Joystick , the indication changes as shown below.

the current date → SU-SA → MO-SA → MO-FR → EVERY SA
→ EVERY MO → EVERY SU → 1 month later → (cycles backward)
→ the current date

Broadcast systems transmit VPS (Video Programme System) or PDC (Programme Delivery Control) signals with their TV programmes. These signals ensure that your timer recordings are made regardless of broadcast delay, early starts or broadcast interruptions.

In step 2 above, push Joystick  to turn on the  indicator after you set the recording date. If you do not want to set the VPS/PDC function, turn off the  indicator. You can also use the VPS/PDC function for a source connected to the LINE-1 (TV) connector (and LINE-2 IN connector).

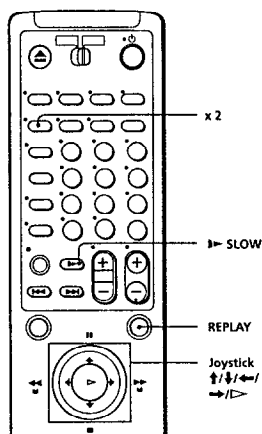
- To set the programme position, you can also use the PROG +/- or programme number buttons.
- To set the tape speed, you can also use TAPE SPEED.

- When setting the timer with VPS/PDC signals, enter the start and stop times exactly as indicated in the TV programme guide, otherwise the VPS/PDC function won't work

- If the VPS/PDC signal is too weak or the broadcasting station failed to transmit VPS/PDC signals, the VCR will start recording at the set time without using the VPS/PDC function.
- "TIMER" and tape indicator flash in the display window if you press with no tape inserted.

40 | Basic Operations

Playing/searching at various speeds



Playback options	Operation
Fast-forward/rewind	During stop, push Joystick to ►► FF or ◄◄ REW and release.
View the picture during fast-forward or rewind	During fast-forward, push and hold down Joystick to ►► FF. During rewind, push and hold down Joystick to ◄◄ REW.
Play at twice the normal speed	During playback, press x2.
Play at non locked high speed	During playback, push Joystick to ◻ or ◻ for more than 1 sec.. Release Joystick to go back to playback mode.
Play at locked high speed	During playback, push Joystick to ◻ or ◻ for less than 1 sec..
Play in slow motion	During playback or pause, press ► SLOW.
Play frame by frame	During pause, push Joystick to ►► FF or ◄◄ REW. To play one frame each second, hold the Joystick down to ►► FF or ◄◄ REW.
Rewind and start play	During stop, while pressing ◄◄ REW on the VCR, press ►► PLAY on the VCR, then release both.
Replay what you just saw	During playback, press REPLAY one, two, three or four times for a replay during 10, 20, 30 or 40 seconds.

continued

Additional Operations | 41

Playing/searching at various speeds (continued)

To resume normal playback

Press Joystick to ►► PLAY.

Tip

- Adjust the picture using PROGRAM +/- buttons on the VCR if:
 - Streaks appear while playing in slow motion.
 - Bands appear at the top or bottom while pausing.
 - The picture shakes while pausing.

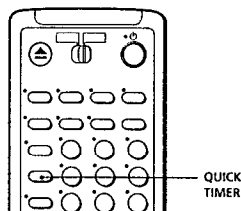
Notes

- The playback sound is muted during these operations.
- In the LP mode, noise may appear or there may be no colour.

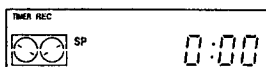
42 | Additional Operations

Recording TV programmes using the quick timer

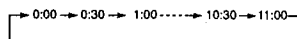
After starting recording in the normal way, you can have the VCR stop recording automatically after a specified duration.



- While recording, press QUICK TIMER once.



- Press QUICK TIMER repeatedly to set the duration. Each press advances the time in increments of 30 minutes.



The duration decreases minute by minute to 0:00, then the VCR stops recording and turns off automatically.

To extend the duration

Press QUICK TIMER repeatedly to set to the new duration.

To stop recording

To stop the VCR while recording, push Joystick to ■ STOP.

Tip

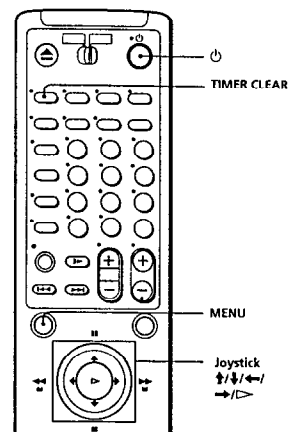
- You can also set the quick timer and start recording during the stop mode.

Additional Operations | 43

Checking/ changing/ cancelling timer settings

Before you start...

- Turn on your TV and set it to the video channel.



- Press ⏻ to turn on the VCR.
- Press MENU, then select TIMER SET/CHECK:

- If you want to change a setting, go on to the next step.
- If you do not need to change the settings, press Joystick, then turn off the VCR to return to recording standby.

e.g. SLV-E720NC/E720VP

TIMER SET/CHECK	16:00H
DATE	START STOP PROG
P17	10/12/20 9:00 20:00 SP
P18	10/12/20 9:00 20:00 SP
P19	10/12/20 9:00 20:00 SP
MO: SA	23:00 0:00 LP
SU: SA	12:12 13:13 27/
VPS/PDS	

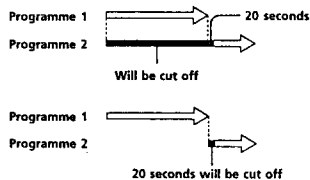
- Push Joystick ↑/↓ to select the setting you want to change or cancel:
 - To change the setting, push Joystick ◄/► to select the item you want to change, and push Joystick ↑/↓ to reset it. To cancel the VPS/PDS function, turn off the [V/P] indicator. Then, push Joystick ► repeatedly until the cursor (►) appears in the leftmost column.
 - To cancel the setting, press TIMER CLEAR.
- Press Joystick.

If any settings remain, turn off the VCR to return to recording standby.

44 | Additional Operations

When the timer settings overlap

The programme that starts first has priority and the second programme starts recording only after the first programme has finished. If the programmes start at the same time, the programme listed first in the menu has priority.



Recording stereo and bilingual programmes

In ZWEITON (German stereo) system

This VCR automatically receives and records stereo and bilingual programmes based on the ZWEITON system. When a stereo or bilingual programme is received, the STEREO indicator appears in the display window.

To select bilingual sound while recording

Press AUDIO MONITOR to select the sound you want.

To listen to	On-screen display	Display window
Main	MAIN	STEREO
Sub	SUB	STEREO
Main and sub	MAIN/SUB	STEREO

In NICAM system (SLV-E720NC/E720NP/E725NP only)

This VCR receives and records stereo and bilingual programmes based on NICAM system (the NICAM indicator appears). When a stereo or bilingual programme is received, the STEREO indicator appears in the display window.

To record a NICAM programme, HI-FI AUDIO in the SET UP MENU should be set to NICAM (initial setting). To check the menu setting, see page 50 for details.

To select the sound while recording

Press AUDIO MONITOR to select the sound you want.

Stereo programme

To listen to	On-screen display	Display window
Stereo	STEREO	STEREO
Standard sound*	No indicator	No indicator

* Usually the mixed sound of left and right channels (monaural)

Additional Operations | 45

46 | Additional Operations

Bilingual programme

To listen to	On-screen display	Display window
Main	MAIN	STEREO
Sub	SUB	STEREO
Main and sub	MAIN/SUB	STEREO
Standard sound*	No indicator	No indicator

* Usually the main sound (monaural)

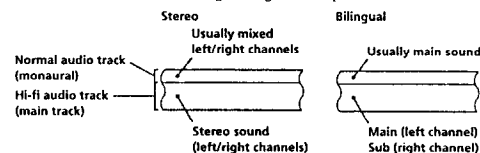
Selecting the sound during playback

Press AUDIO MONITOR to select the sound you want.

To listen to	On-screen display	Display window
Stereo/main and sub (left and right channels)	STEREO	STEREO
Left channel/main	LCH	STEREO
Right channel/sub	RCH	STEREO
Standard sound	No indicator	No indicator

How sound is recorded on a video tape

The VCR records sound onto two separate tracks. Hi-fi audio is recorded onto the main track along with the picture. Monaural sound is recorded onto the normal audio track along the edge of the tape.



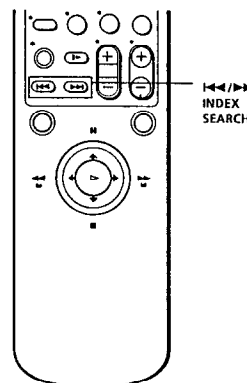
Notes

- To listen to playback sounds in stereo, you must use the EURO-AV or AUDIO OUT connections.
- When you play a tape recorded in monaural, the sound is heard in monaural regardless of the AUDIO MONITOR setting.
- If the AUDIO MONITOR button does not function, check that AUDIO MIX in the SET UP MENU is set to OFF.
- If HI-FI AUDIO is set to STD, the standard sound will be recorded on both the hi-fi and normal audio tracks. Pressing AUDIO MONITOR will not change the sound (SLV-E720NC/E720NP/E725NP only).

Additional Operations | 47

Searching using the index function

The VCR marks the tape with an index signal at the point where each recording begins. You can use these signals as references to find a specific recording. The VCR can search up to 99 index signals ahead of or behind the current position.



- Insert an indexed tape into the VCR.
- Press **INDEX SEARCH** repeatedly to specify how many index signals ahead or backwards you want to search:
 - To search ahead, press **INDEX SEARCH**.
 - To search backwards, press **INDEX SEARCH**.

The VCR starts searching and the index number on the TV screen counts down to zero. Playback starts automatically from that point.

To stop searching

Push Joystick to **STOP**.

Note

- No index signal will be added when recording starts from recording pause. However, an index signal will be marked if you change the channel during recording pause.

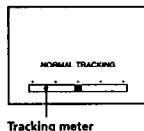
48 | Additional Operations

Adjusting the picture

Adjusting the tracking

Although the VCR automatically adjusts the tracking when playing a tape (the  indicator flashes in the display window, then lights off), distortion may occur if the tape was recorded in poor condition. If so, adjust the tracking manually.

During playback, press PROGRAM +/- buttons on the VCR to display the tracking meter ( lights up). Distortion should disappear as you press one of the two buttons. If you cannot get a clear picture with manual adjustment, eject and reinsert the tape or press the buttons PROGRAM + and PROGRAM - at the same time so that the tracking meter comes back to the center.

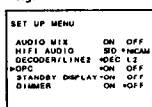


Tracking meter

About Optimum Picture Control (OPC)

Optimum Picture Control (OPC) automatically improves recording and playback quality by adjusting the VCR to the condition of the video heads and tape. To maintain better picture quality, we recommend that you set OPC to ON in the SET UP MENU (with the OPC indicator lit in the display window).

• g. SLV-E720NP/E725NP



OPC playback

The OPC function automatically works on all types of tapes, including rental tapes and tapes that were not recorded with OPC.

OPC recording

Whenever you insert a tape and first start recording, the VCR adjusts to the tape using the OPC function (the OPC indicator flashes rapidly). This adjustment is retained until the tape is ejected.

To deactivate the OPC

Press MENU and select SET UP MENU, then set OPC to OFF. The OPC indicator in the display window goes off.

Note

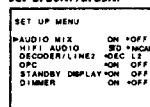
- There is a delay of a few seconds before the VCR actually starts recording while the VCR analyses the tape. To avoid the delay, first set the VCR to recording pause (the OPC indicator flashes slowly) and press  REC to have the VCR analyse the tape (the OPC indicator flashes rapidly). After the OPC indicator stops flashing, push joystick to  PAUSE to start recording immediately. If you want to start recording quickly without using the OPC function, first set the VCR to recording pause (the OPC indicator flashes slowly) and push joystick to  PAUSE to start recording.

Additional Operations | 49

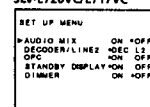
Changing menu options

1 Press MENU, then select SET UP MENU.

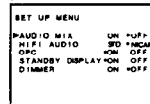
SLV-E720NP/E725NP



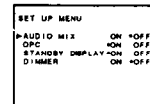
SLV-E720VC/E717VC



SLV-E720NC



SLV-E720VP



2 Push Joystick / to select the option to change, then push joystick / to change the setting.

3 Press joystick to return to the original screen.

Menu choices

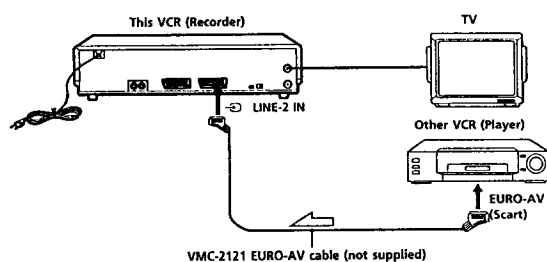
Initial settings are indicated in bold print.

Menu option	Set this option to
HIFI AUDIO	STD to record standard sound on the hi-fi audio track.
(SLV-E720NC/E720NP/E725NP only)	NICAM to record NICAM broadcasts on the hi-fi audio track. For details, see page 46.
AUDIO MIX	ON to listen to the hi-fi and normal audio tracks at the same time. The AUDIO MONITOR button will not function. OFF to listen to the hi-fi and normal audio tracks separately. Select the sound using the AUDIO MONITOR button.
DECODER/LINE 2 (SLV-E720NP/E725NP/E720VC/E717VC)	DEC select PAY-TV DECODER (Canal Plus) for 2nd Euroconnector L2 select LINE-2 IN for 2nd Euroconnector (only)
OPC	ON to switch on the OPC (Optimum Picture Control) function and improve picture quality, OFF to switch OPC off.
STANDBY DISPLAY	ON to light up the indicators in the display window while the VCR is standing by. OFF to turn off the indicators in the display window to conserve the VCR power
DIMMER	ON to make the display window dim, OFF to make it brighter.

50 | Additional Operations

Editing with another VCR

How to connect to record on this VCR



Tips

- If the other VCR doesn't have a EURO-AV (Scart) connector, use the VMC-2106 cable instead and connect the cable to the line out jacks of the other VCR.
- Be sure to select LINE-2 IN in 2nd EURO-AV in SET UP MENU (SLV-E720VC/E717VC/E720NP/E725NP only).

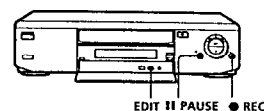
continued

Additional Operations | 51

Editing with another VCR (continued)

Operation

(when recording on this VCR)



Before you start editing

- Turn on your TV and set it to the video channel.
- Press INPUT SELECT to display "L2" in the display window.
- Press TAPE SPEED to select the tape speed, SP or LP.
- On this VCR, press EDIT so that EDIT lights in the display. If the other VCR has a similar feature, set it to ON as well.

- Insert a source tape with its safety tab removed into the other (playback) VCR. Search for the point to start playback and set it to playback pause.
- Insert a tape with its safety tab in place into this (recording) VCR. Search for the point to start recording and press  PAUSE.
- Press  REC on this VCR to set it to recording pause.
- To start editing, press the  PAUSE buttons on both VCRs at the same time.

To stop editing

Press the  STOP buttons on both VCRs.

Tips

- To edit more precisely, press the  PAUSE buttons on the VCRs to release pause.
- To cut out unwanted scenes while editing, press  PAUSE on this VCR when an unwanted scene begins. When it ends, press  PAUSE again to resume recording (Assemble Editing).

Note

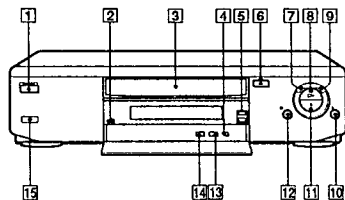
- If you start recording following the procedure above, the VCR won't start recording with the OPC function. To record a tape with the OPC function, press  REC again during recording pause in step 3 so that the VCR analyses the tape. Then when you start recording in step 4, press  PAUSE after the OPC indicator stops flashing. If you press  PAUSE before the OPC indicator stops flashing, the OPC function is cancelled.

52 | Additional Operations

Index to parts and controls

Refer to the pages indicated in parentheses () for details.

Front panel

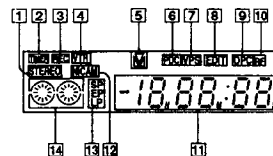


- | | |
|-----------------------------------|-------------------------|
| 1 ON/STANDBY switch/indicator (9) | 8 ▷ PLAY button (41) |
| 2 TV/VTR button | 9 ►► FF button |
| 3 Tape compartment | 10 ● REC button (52) |
| 4 RF CHANNEL button (9) | 11 ■ STOP button (52) |
| 5 PROGRAM +/- buttons (10) | 12 PAUSE button (52) |
| Tracking buttons (49) | 13 EDIT button (52) |
| 6 ▲ EJECT button (32) | 14 TAPE SPEED button |
| 7 ◀◀ REW button (41) | ▶ Remote sensor |

continued

Index to parts and controls (continued)

Display window

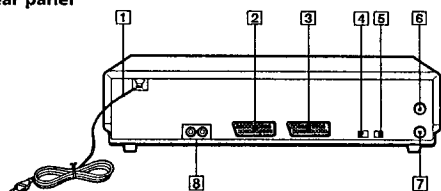


- | | |
|--------------------------------|---|
| 1 STEREO indicator (46) | 9 OPC indicator (49) |
| 2 TIMER indicator (36, 39) | 10 RF indicator (9) |
| 3 REC indicator | 11 Line/programme position indicator (9, 33, 52) |
| 4 VTR indicator (8) | Time counter/clock (32) |
| 5 AUTO TRACKING indicator (49) | 12 NICAM indicator (SLV-E720NC/E720NP/E725NP only) (46) |
| 6 PDC indicator (40) | 13 Tape speed indicator (33) |
| 7 VPS indicator (40) | 14 Tape indicator |
| 8 EDIT indicator (52) | |

Additional Information | 57

58 | Additional Information

Rear panel

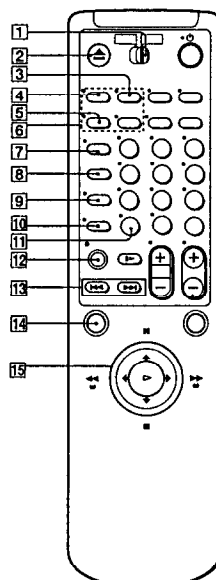


- | | |
|---|--|
| 1 Mains lead (7) | 4 NTSC 4.43 switch (32) |
| 2 G- LINE-1 TV/LIGNE -1 TV connector (8, 27, 28) | 5 RF MODULATOR switch (7) |
| 3 ⇄ DECODER/DECODEUR/LINE-2 IN/ENTREE LIGNE-2 connector (27, 28, 51) (SLV-E720NP/E725NP/E720VC/E717VC only) | 6 AERIAL OUT/ANTENNE SORTIE connector (7) |
| 3 ⇄ LINE-2 IN/ENTREE LIGNE-2 connector (27, 28, 51) (SLV-E720NP/E720VP) | 7 AERIAL IN/ANTENNE ENTREE connector (7) |
| | 8 AUDIO OUT L/R/SORTIE AUDIO D/G jacks (8) |

continued

Index to parts and control (continued)

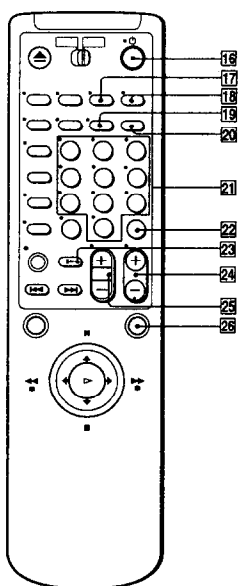
Remote commander



- | |
|--|
| 1 TV/VIDEO remote control switch (5) |
| 2 ▲ EJECT button (32) |
| 3 COUNTER RESET button (32) |
| 4 TIMER CLEAR button (22, 36, 44) |
| 5 x 2 button (41) |
| 6 FASTTEXT buttons (for TV) (6) |
| 7 DISPLAY button (34) |
| 8 QUICK TIMER button (43) |
| 9 INPUT SELECT button (34, 39, 52) |
| ⊞ Teletext button (for TV) (6) |
| 10 TAPE SPEED button (33) |
| □ TV power on/TV mode select button (for TV) (6) |
| 11 -/- (ten's digit) button (34) |
| 12 ● REC button (33) |
| 13 ◀◀/▶▶ INDEX SEARCH buttons (48) |
| 14 MENU button (11) |
| 15 Joy stick (11) |

Additional Information | 59

60 | Additional Information

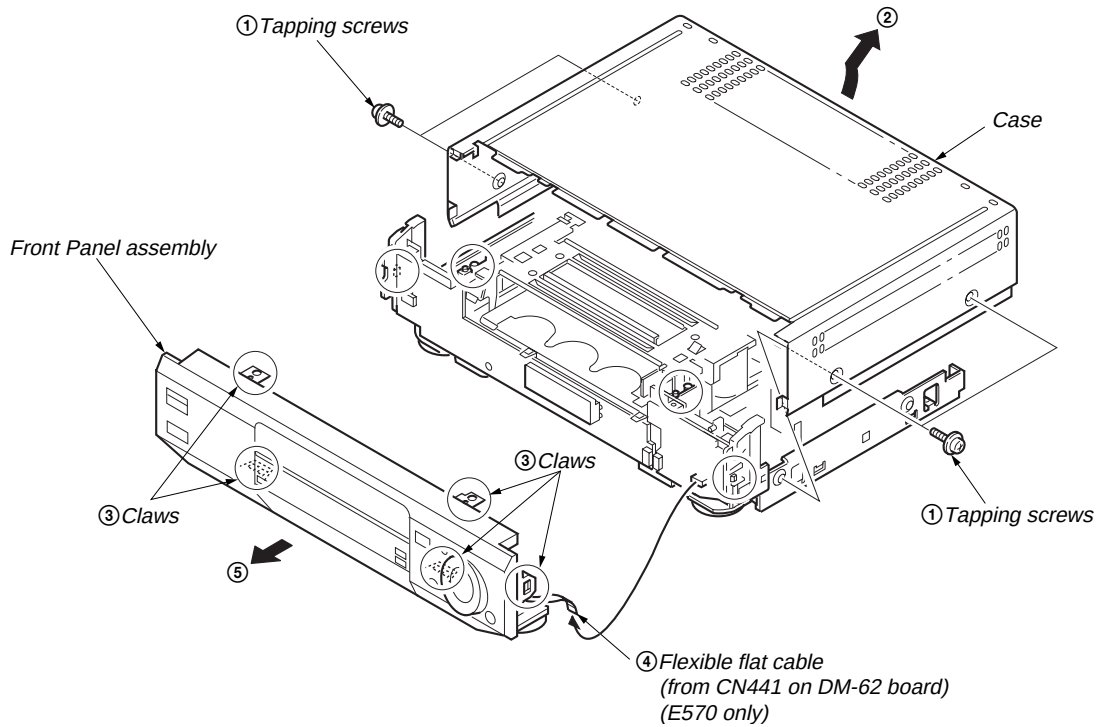


- 16 ⏻ (on/standby) switch (36)
- 17 WIDE button (for TV) (6)
- 18 AUDIO MONITOR button (46)
- 19 TV/VIDEO button (8)
- 20 SHOWVIEW button (35)
- 21 Programme number buttons (14, 34, 35)
- 22 SET button (36)
- 23 ► SLOW button (41)
- 24 PROG +/- buttons (14, 29, 33)
- 25 √ / 0 Teletext page access buttons (for TV) (6)
- 26 VOL +/- buttons (for TV) (6)
- 28 REPLAY button (41)

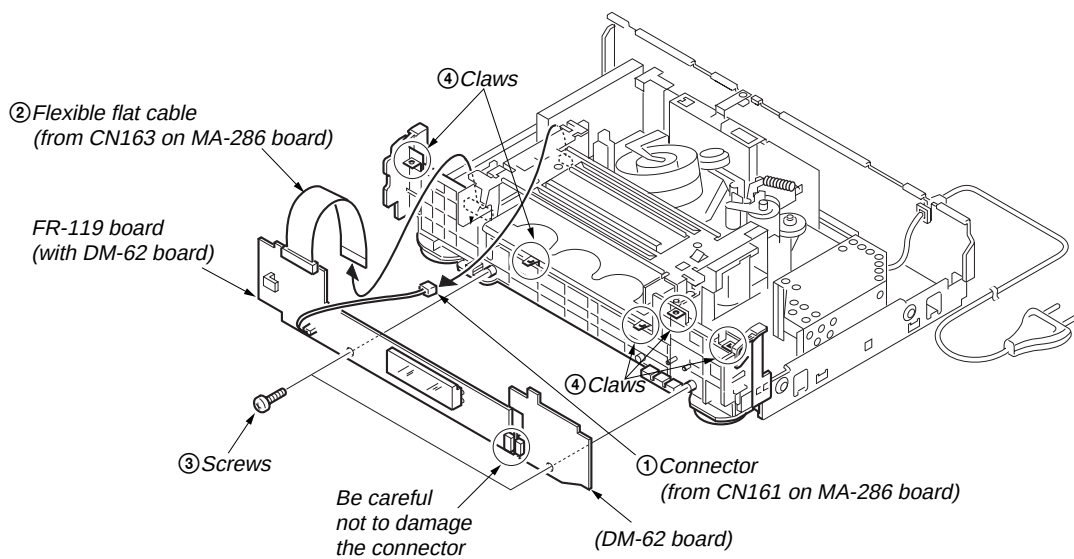
SECTION 2 DISASSEMBLY

NOTE : Follow the disassembly procedure in the numerical order given.

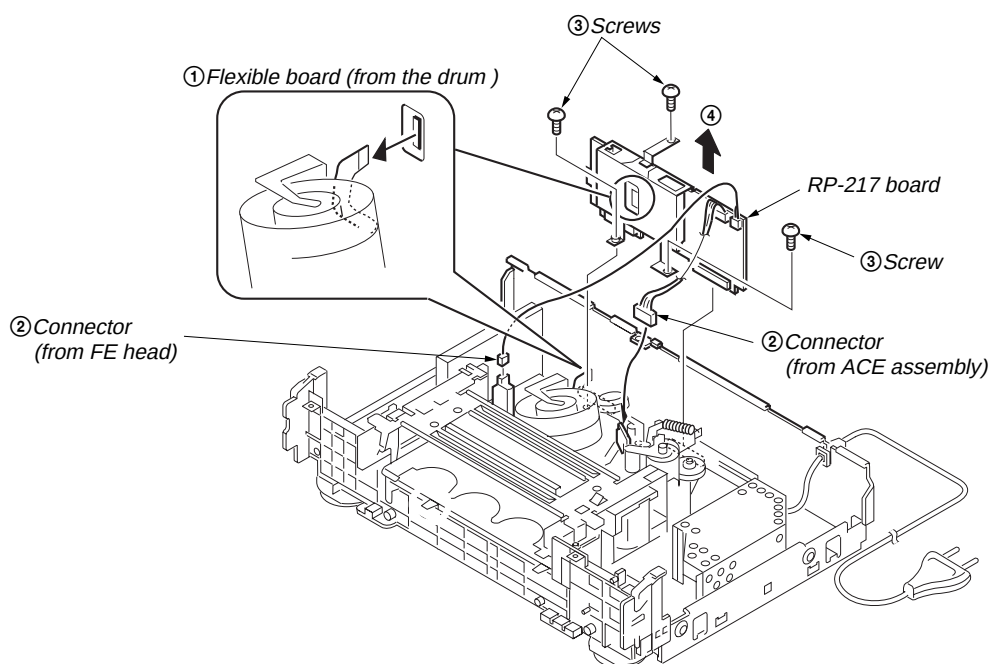
2-1. CASE AND FRONT ASSEMBLY



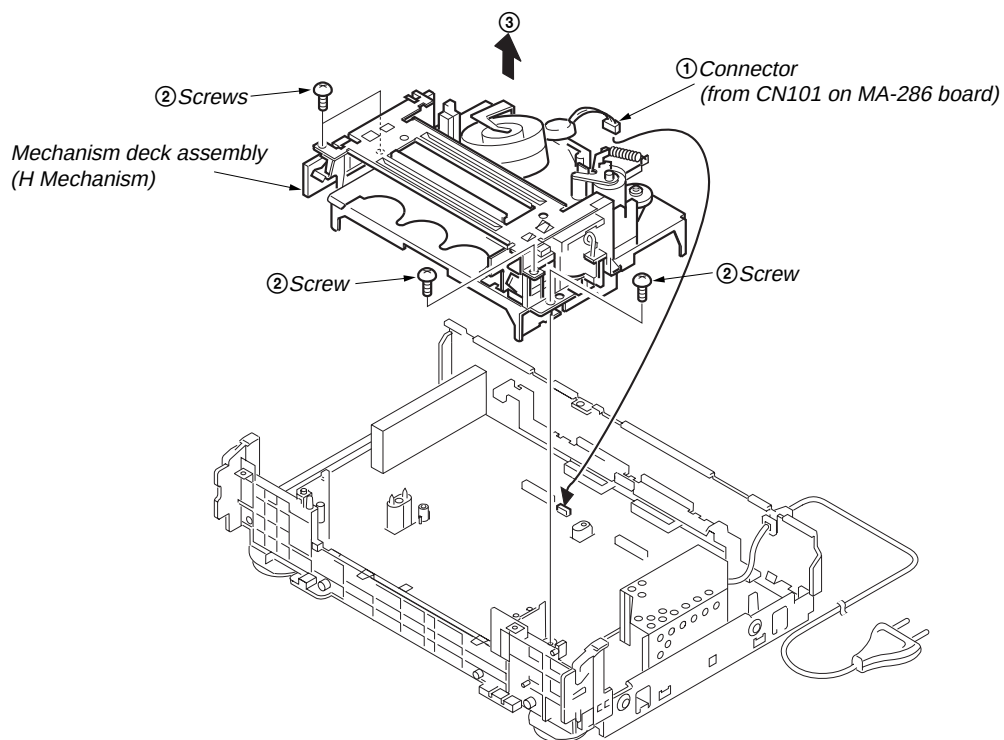
2-2. FR-119 BOARD (WITH DM-62 BOARD)



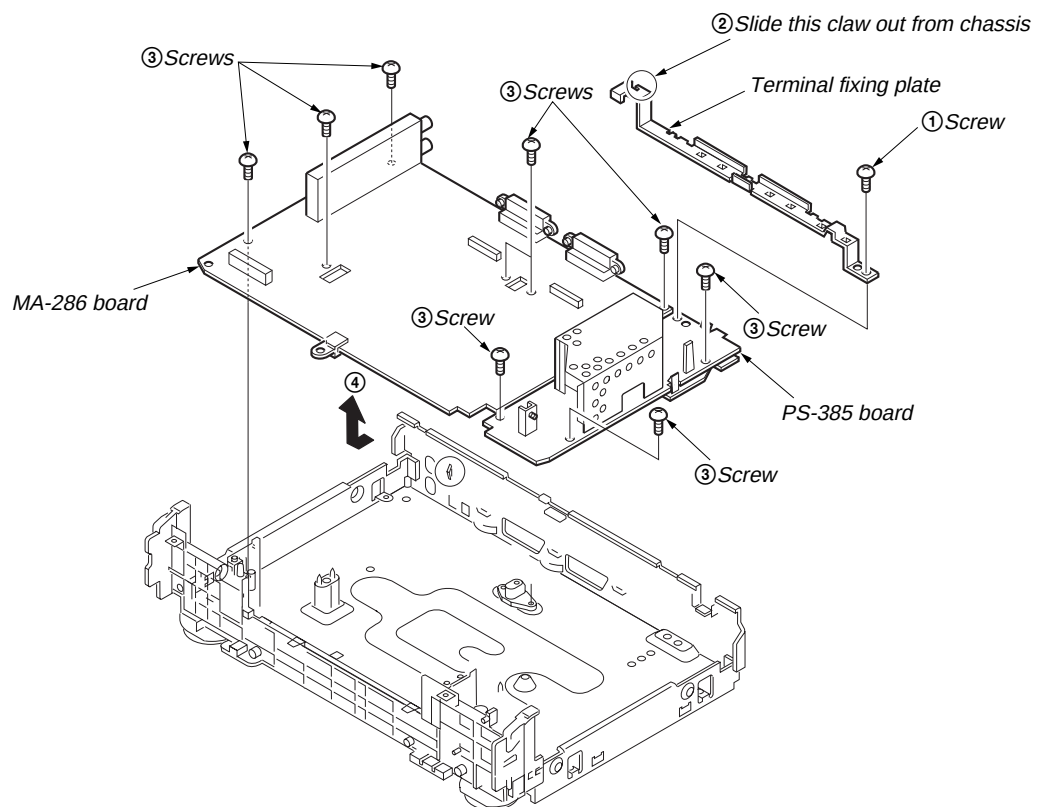
2-3. RP-217 BOARD



2-4. MECHANISM DECK ASSEMBLY (H MECHANISM)



2-5. MA-286 AND PS-385 BOARDS



2-6. CIRCUIT BOARDS LOCATION

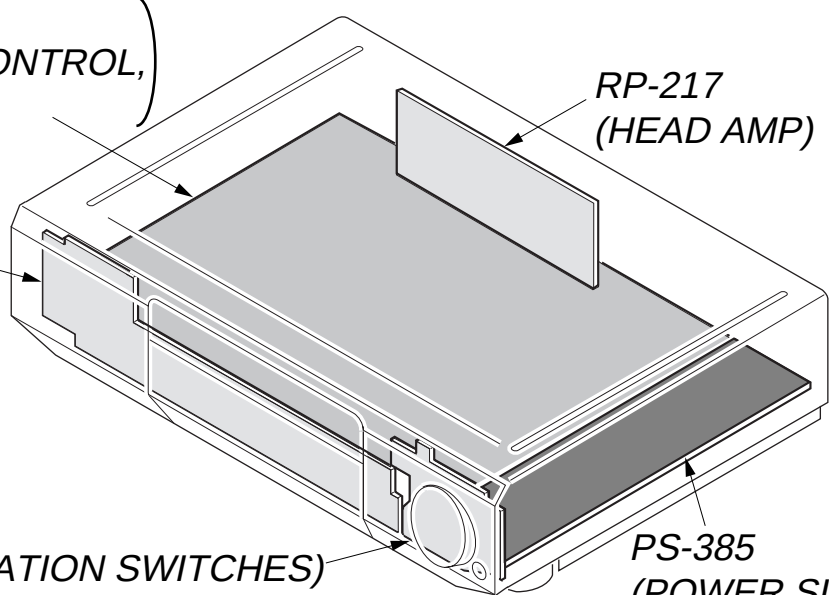
MA-286
(VIDEO, AUDIO
SERVO/SYSTEM CONTROL,
TUNER)

FR-119
(MODE CONTROL)

DM-62
(OPERATION SWITCHES)

RP-217
(HEAD AMP)

PS-385
(POWER SUPPLY)



SECTION 5 REPAIR PARTS LIST

5-1. EXPLODED VIEWS

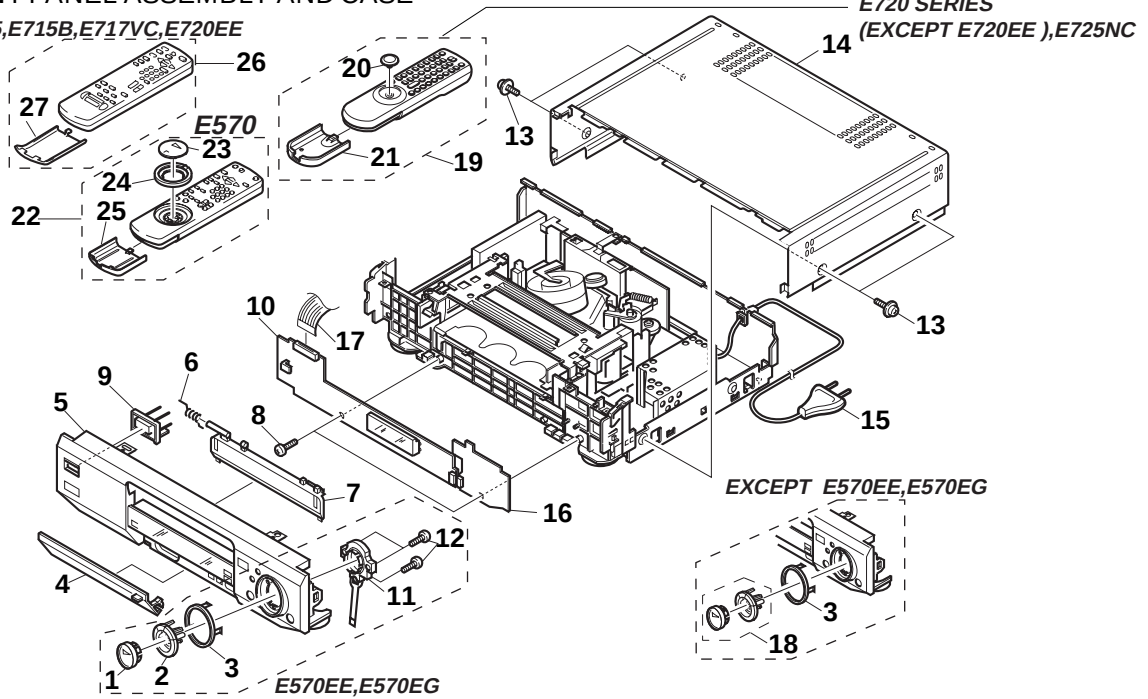
NOTE:

- XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

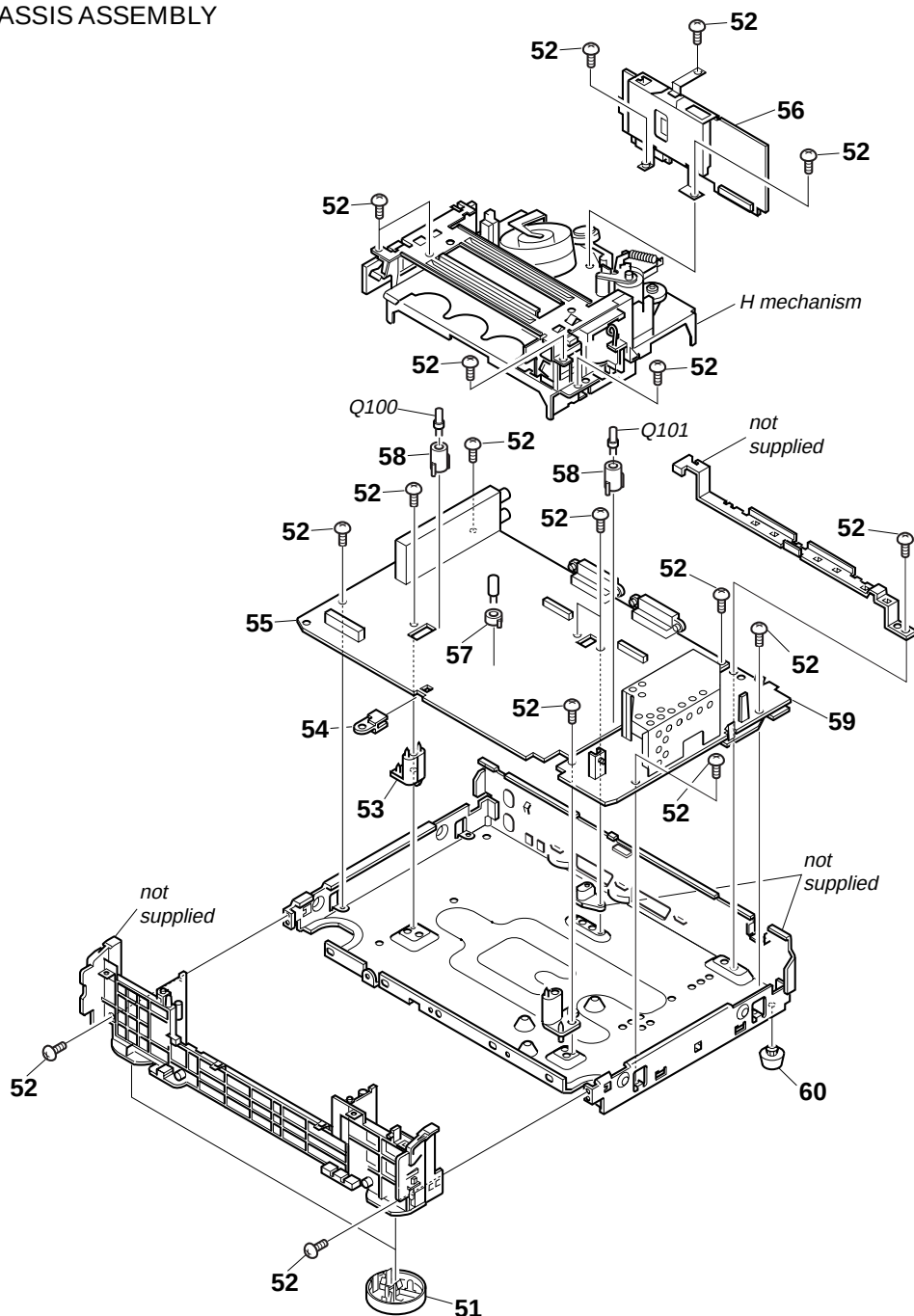
5-1-1. FRONT PANEL ASSEMBLY AND CASE

E325,E475,E715B,E717VC,E720EE



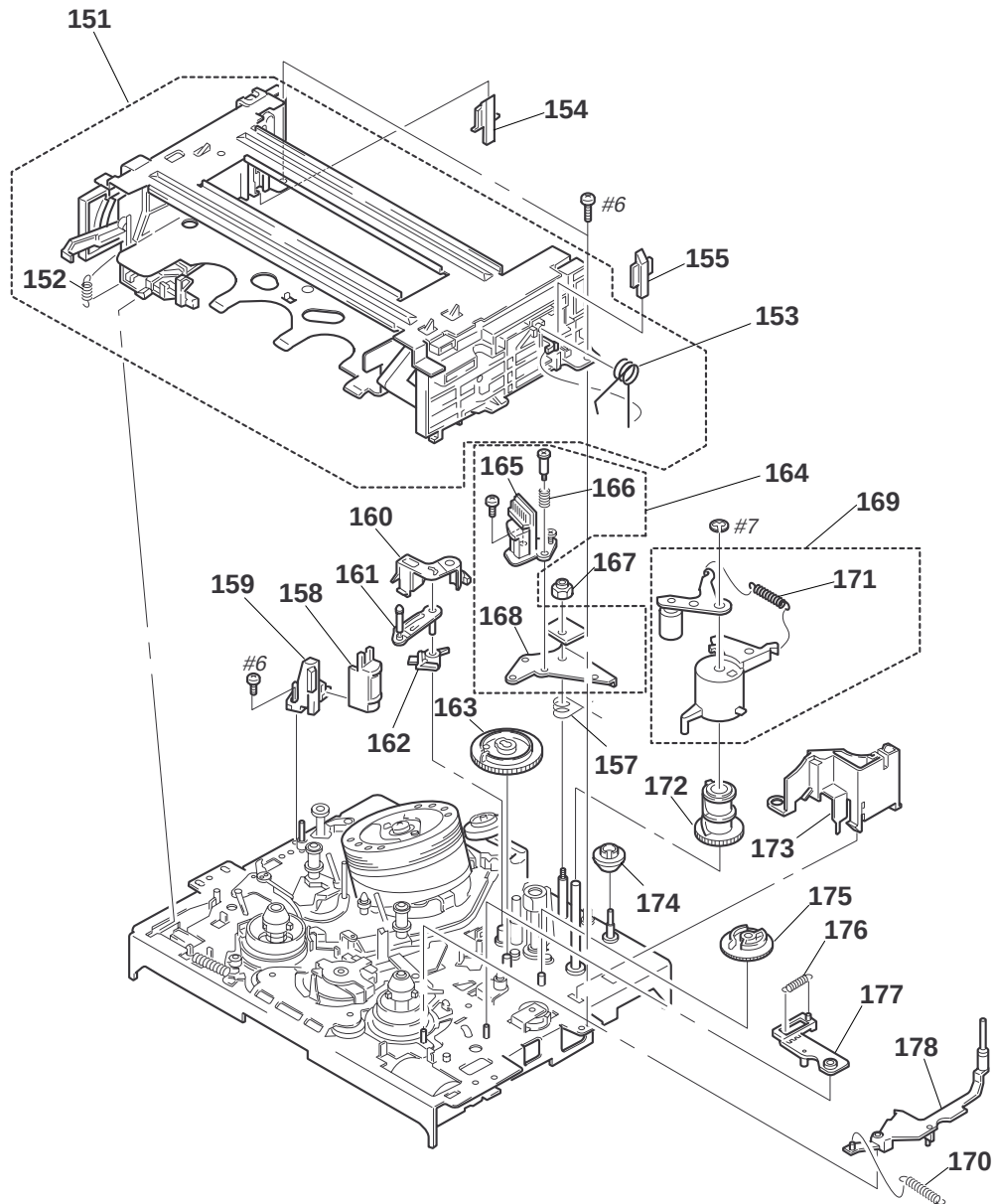
Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
1	3-972-782-11	BUTTON, CENTER(570)		* 10	A-6791-209-A	FR-119 BOARD, COMPLETE(720BZ)	
2	3-973-077-11	RING, CHANGE SPEED(570)		* 10	A-6791-213-A	FR-119 BOARD, COMPLETE(325)	
* 3	3-972-781-21	PLATE, RING ORNAMENTAL(EXCEPT 570)		* 10	A-6791-216-A	FR-119 BOARD, COMPLETE(475)	
3	3-974-511-01	PLATE, RING ORNAMENTAL(570)		11	1-762-844-21	SWITCH, ROTARY (570)	
4	3-970-162-31	DOOR (A), JACK (EXCEPT 325, 570, 715B, 717VC, 720B, 720BZ)		12	3-968-554-01	SCREW (WN1411 D2.5 EJOT K25) (570)	
4	3-970-162-91	DOOR (A), JACK(720B, 720BZ)		13	3-363-099-01	SCREW (CASE 3 TP2)	
4	3-974-145-71	DOOR (A), JACK(570)		* 14	3-972-887-01	CASE (LS), UPPER (EXCEPT 715B, 717VC, 725)	
4	3-974-145-81	DOOR (A), JACK(325)		* 14	3-972-887-11	CASE (LS), UPPER (715B, 717VC, 725)	
4	3-974-145-91	DOOR (A), JACK(717VC, 725NC)		Δ 15	1-782-012-11	CORD, POWER	
4	3-975-692-01	DOOR (A), JACK(715B)		* 16	A-6790-203-A	DM-62 BOARD, COMPLETE	
5	X-3946-637-1	PANEL ASSY, FRONT(720VC, 720VP)		17	1-777-960-11	CABLE, FLAT (FFM-13) 29P	
5	X-3946-993-1	PANEL ASSY, FRONT(720B, 720BZ)		18	X-3946-983-1	BUTTON ASSY, FUNCTION(720B, 720BZ)	
5	X-3946-994-1	PANEL ASSY, FRONT(720NP)		18	X-3946-992-1	BUTTON ASSY, FUNCTION (EXCEPT 570, 715B, 717VC, 720B, 720BZ, 725)	
5	X-3946-995-1	PANEL ASSY, FRONT(720NC)		18	X-3947-231-1	BUTTON ASSY, FUNCTION(717VC, 725)	
5	X-3946-996-1	PANEL ASSY, FRONT(720EX, 720UX)		18	X-3947-232-1	BUTTON ASSY, FUNCTION(715B)	
5	X-3946-997-1	PANEL ASSY, FRONT(720EG)		19	1-475-024-11	REMOTE COMMANDER (RMT-V197) (720EG, 720NC, 720NP, 720VC, 720VP, 725)	
5	X-3946-998-1	PANEL ASSY, FRONT(720EE)		19	1-475-024-21	REMOTE COMMANDER (RMT-V197A) (720EX, 720UX)	
5	X-3946-999-1	PANEL ASSY, FRONT(570EG)		19	1-475-024-31	REMOTE COMMANDER (RMT-V197B) (720B, 720BZ)	
5	X-3947-000-1	PANEL ASSY, FRONT(570EE)		20	3-709-131-01	HEAD (ENGLISH), JOY STICK (720EG, 720EX, 720NC, 720NP, 720UX, 720VC, 720VP, 725)	
5	X-3947-001-1	PANEL ASSY, FRONT(475)		20	3-709-132-01	HEAD (FRENCH), JOY STICK (720B, 720BZ)	
5	X-3947-002-1	PANEL ASSY, FRONT(325)		21	3-709-129-01	COVER, BATTERY (720B, 720BZ, 720EG, 720EX, 720NC, 720NP, 720UX, 720VC, 720VP, 725)	
5	X-3947-233-1	PANEL ASSY, FRONT(717VC)		22	1-475-030-11	REMOTE COMMANDER (RMT-V199) (570EE)	
5	X-3947-234-1	PANEL ASSY, FRONT(715B)		22	1-475-030-21	REMOTE COMMANDER (RMT-V199A) (570EG)	
5	X-3947-235-1	PANEL ASSY, FRONT(725)		23	3-972-850-01	BUTTON, FUNCTION (570EG, 570EE)	
6	3-953-432-01	SPRING (GE), FL		24	3-973-077-31	RING, CHANGE SPEED(570EE, 570EG)	
7	3-972-883-01	DOOR, CASSETTE		25	3-709-126-01	COVER, BATTERY(570EG, 570EE)	
8	3-970-608-21	SUMMITTE (B3), +BV		26	1-475-025-11	REMOTE COMMANDER (RMT-V198) (475, 720EE)	
9	3-966-213-01	BUTTON, POWER		26	1-475-025-21	REMOTE COMMANDER (RMT-V198A) (325)	
* 10	A-6791-182-A	FR-119 BOARD, COMPLETE(720VP)		26	1-475-067-21	REMOTE COMMANDER (RMT-V198K) (715B)	
* 10	A-6791-184-A	FR-119 BOARD, COMPLETE(720UX)		26	1-475-067-11	REMOTE COMMANDER (RMT-V198J) (717VC)	
* 10	A-6791-188-A	FR-119 BOARD, COMPLETE(717VC, 720VC)		27	3-709-128-01	COVER, BATTERY(325, 475, 715B, 717VC, 720EE)	
* 10	A-6791-191-A	FR-119 BOARD, COMPLETE(715B, 720B)					
* 10	A-6791-193-A	FR-119 BOARD, COMPLETE(720EE)					
* 10	A-6791-195-A	FR-119 BOARD, COMPLETE(720EX)					
* 10	A-6791-197-A	FR-119 BOARD, COMPLETE(720NP)					
* 10	A-6791-199-A	FR-119 BOARD, COMPLETE(720NC, 725)					
* 10	A-6791-202-A	FR-119 BOARD, COMPLETE(570EG)					
* 10	A-6791-205-A	FR-119 BOARD, COMPLETE(570EE)					
* 10	A-6791-208-A	FR-119 BOARD, COMPLETE(720EG)					

5-1-2. CHASSIS ASSEMBLY



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
51	3-966-229-01	INSULATOR (ST)		* 56	A-6791-187-A	RP-217 BOARD, COMPLETE (EXCEPT 325, 475, 570)	
52	3-970-608-21	SUMITITE (B3), +BV		* 56	A-6791-201-A	RP-217 BOARD, COMPLETE(570)	
53	3-959-381-01	BASE (L), MD		* 56	A-6791-212-A	RP-217 BOARD, COMPLETE(325)	
54	3-966-237-01	HOLDER (ST), MA		* 56	A-6791-215-A	RP-217 BOARD, COMPLETE(475)	
* 55	A-6791-181-A	MA-286 BOARD, COMPLETE(720VP)		57	3-960-274-01	SPACER, LED	
* 55	A-6791-183-A	MA-286 BOARD, COMPLETE(720UX)		58	3-960-273-01	SPACER, TOP/END	
* 55	A-6791-185-A	MA-286 BOARD, COMPLETE(717VC, 720VC)		* 59	A-6791-186-A	PS-385 BOARD, COMPLETE	
* 55	A-6791-190-A	MA-286 BOARD, COMPLETE(715B, 720B)		60	3-957-819-01	FOOT	
* 55	A-6791-192-A	MA-286 BOARD, COMPLETE(720EE)		D100	8-719-048-26	DIODE GL528V1	
* 55	A-6791-194-A	MA-286 BOARD, COMPLETE(720EX)		Q100	8-729-025-92	PHOTOTRANSISTOR PT380F	
* 55	A-6791-196-A	MA-286 BOARD, COMPLETE(720NP)		Q101	8-729-025-92	PHOTOTRANSISTOR PT380F	
* 55	A-6791-198-A	MA-286 BOARD, COMPLETE(720NC, 725)					
* 55	A-6791-200-A	MA-286 BOARD, COMPLETE(570EG)					
* 55	A-6791-204-A	MA-286 BOARD, COMPLETE(570EE)					
* 55	A-6791-206-A	MA-286 BOARD, COMPLETE(720BZ)					
* 55	A-6791-207-A	MA-286 BOARD, COMPLETE(720EG)					
* 55	A-6791-211-A	MA-286 BOARD, COMPLETE(325)					
* 55	A-6791-214-A	MA-286 BOARD, COMPLETE(475)					

5-1-3. MECHANISM DECK ASSEMBLY-1



Ref. No.	Part No.	Description
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Remarks

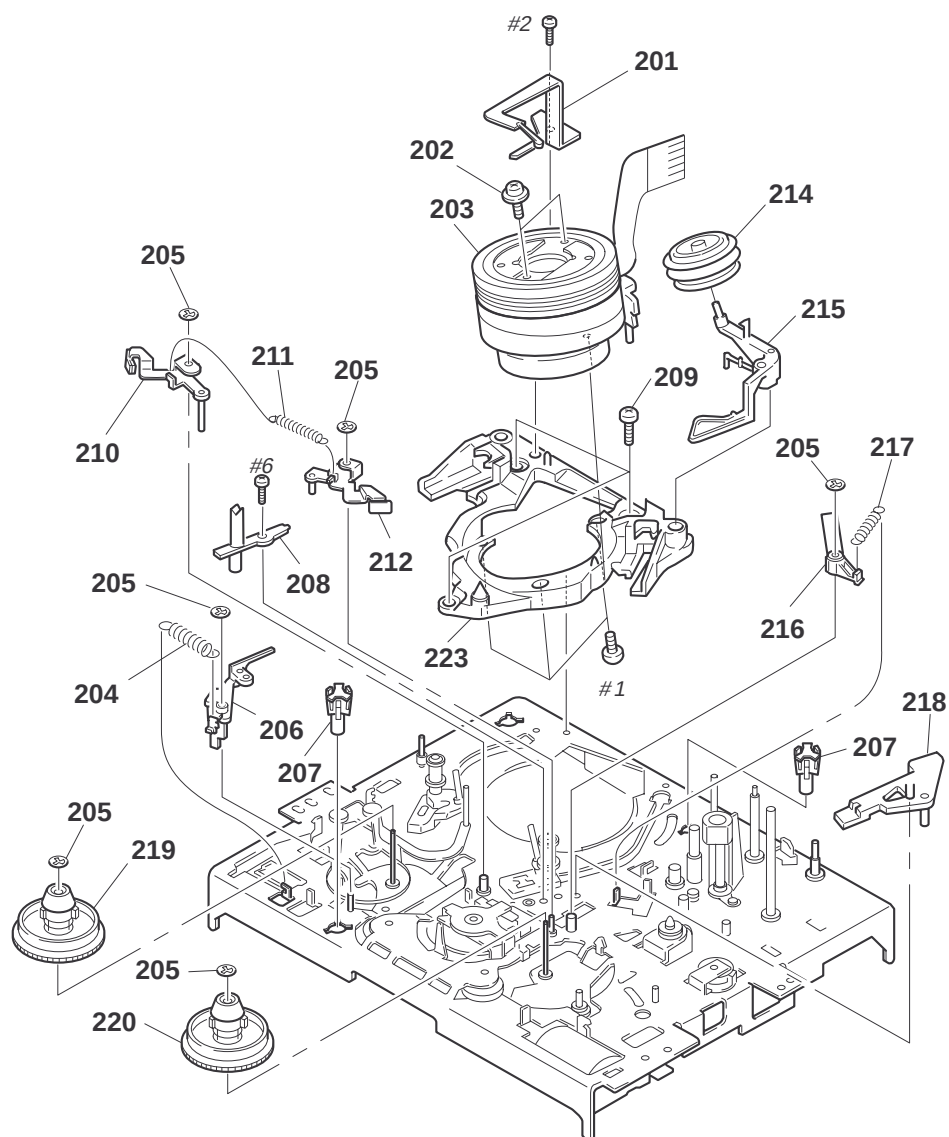
151	A-6759-603-A	FL BLOCK ASSY
152	3-958-467-01	SPRING, TENSION COIL
153	3-970-471-01	SPRING, TORSION
154	3-958-488-03	PLATE, LIGHT GUIDE, END SENSOR
155	3-970-473-01	PLATE, LIGHT GUIDE, TOP SENSOR
157	3-958-487-01	SPRING, (ACE) TORSION COIL
158	1-500-144-11	HEAD, FE
159	X-3945-348-2	FEH ASSY
160	3-962-298-01	BRACKET, TG7 TAPE
161	X-3944-797-1	TG8 ASSY
162	3-958-421-01	HOLDER, TG8
163	3-958-152-01	GEAR, TG8
164	A-6736-105-A	ACE BLOCK ASSY

Ref. No.	Part No.	Description
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Remarks

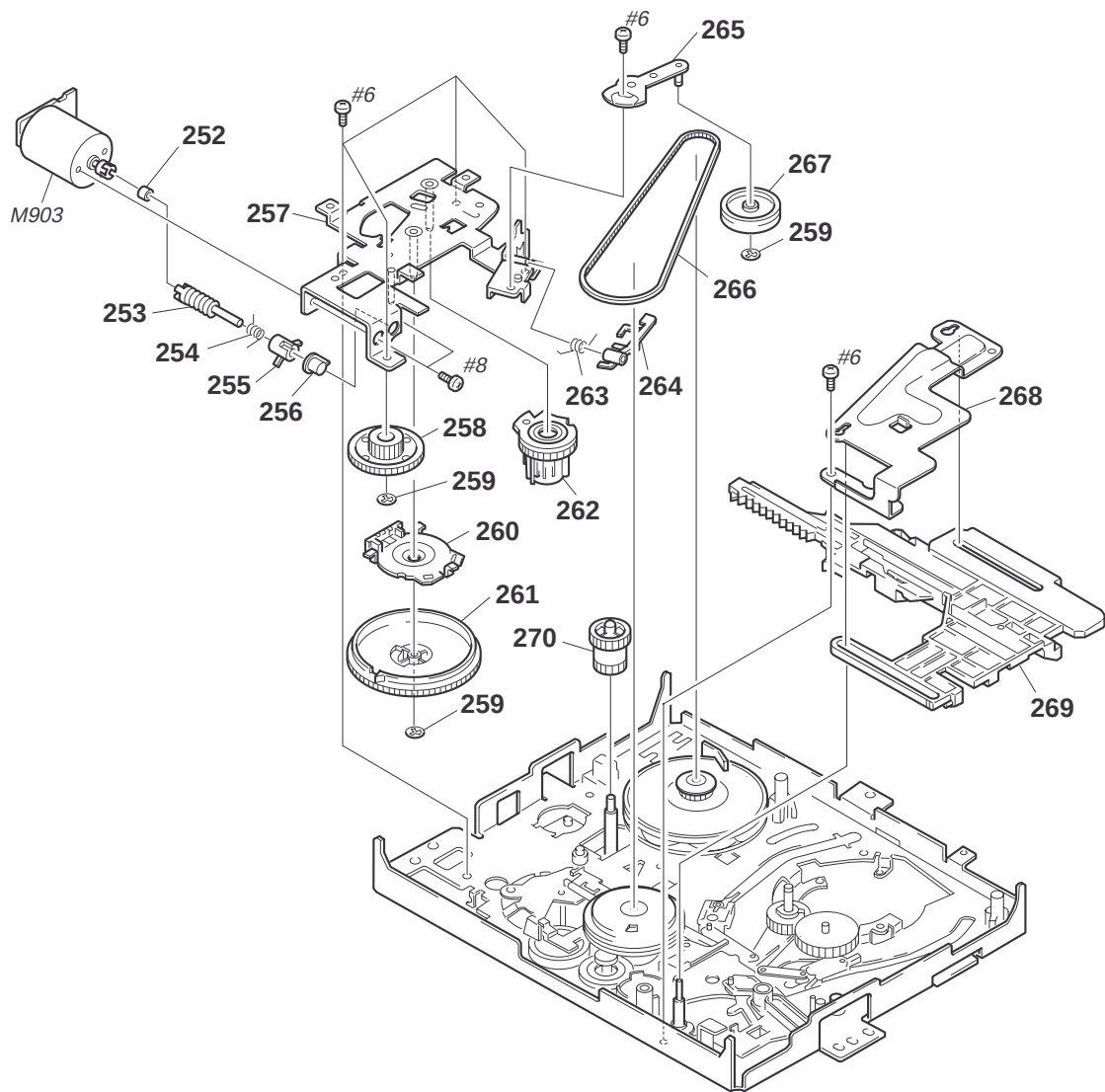
165	1-506-485-11	PIN, CONNECTOR 6P
166	3-960-439-02	SPRING (ACE), COMPRESSION
167	3-942-867-01	NUT, AC HEIGHT ADJUSTMENT
168	3-958-491-01	BASE, ACE
169	A-6746-072-A	PRESS BLOCK ASSY, PINCH
170	3-958-505-01	SPRING (SOFT BRAKE T), TENSION
171	3-958-455-01	SPRING (PINCH), TENSION
172	3-958-151-01	GEAR, ELEVATOR
173	3-958-454-01	OPNER, LID
174	3-958-501-01	SCREW, ACE ADJUSTMENT
175	3-958-153-01	GEAR, PRESS
176	3-958-462-01	SPRING (RVS BRAKE), TENSION
177	X-3943-885-1	ARM ASSY, RVS BRAKE
178	X-3943-882-1	BRAKE (T) ASSY, SOFT

5-1-4. MECHANISM DECK ASSEMBLY-2



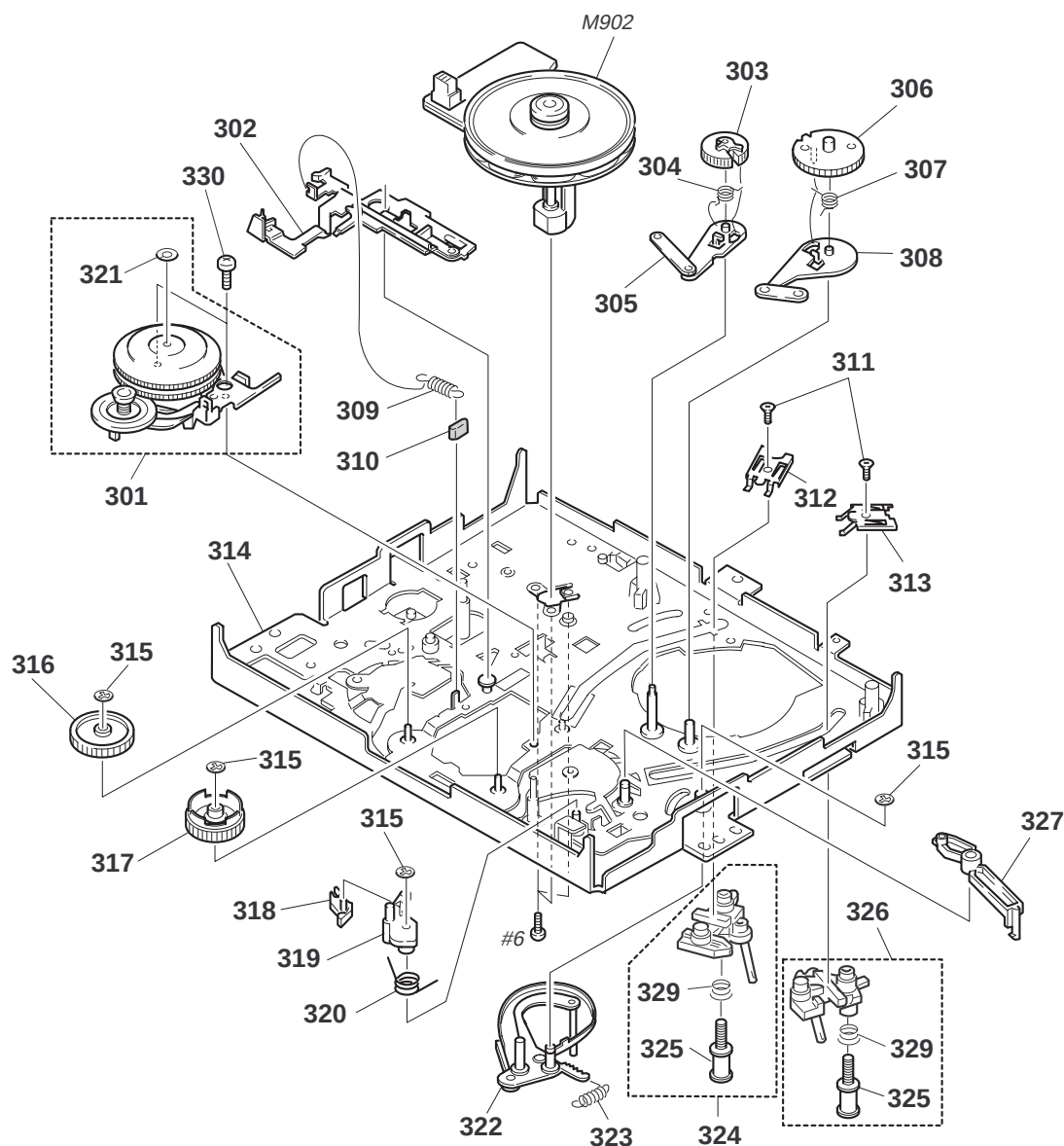
Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
201	X-3943-899-8	GROUND ASSY, SHAFT		211	3-958-517-01	SPRING, TENSION COIL	
202	2-643-205-01	SCREW		212	X-3945-444-1	ARM (T) ASSY, MAIN BRAKE	
203	1-759-183-11	DRUM ASSY DZH-78A-R (325)		214	X-3947-255-1	ROLLER ASSY, HC	
203	1-759-371-11	DRUM ASSY DZH-65A-R (475, 570)		215	3-975-724-01	ARM, HC	
203	1-759-373-11	DRUM ASSY DZH-86A-R (EXCEPT 325, 475, 570)		216	3-960-139-01	ARM, NEUTRALITY	
204	3-958-443-01	SPRING, STRETCH COIL SPRING		217	3-958-535-01	SPRING, TENSION	
205	3-669-595-00	WASHER (2), STOPPER		218	3-960-138-01	ARM, PENDULUM COMPULSION	
206	3-958-450-01	BRAKE (S), SOFT		219	X-3943-902-1	TABLE, REEL (S) ASSY	
207	3-958-390-01	SHAFT, PC BOARD		220	X-3943-903-1	TABLE, REEL (T) ASSY	
208	3-958-391-01	PLATE, LIGHT GUIDE, LED		223	3-969-629-01	DRUM BASE	
209	3-961-441-01	SCREW (3x8)					
210	X-3945-443-1	BRAKE (S) ASSY, MAIN					

5-1-5. MECHANISM DECK ASSEMBLY-3



Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
Remarks			Remarks		
252	3-959-840-11	RUBBER, JOINT	262	3-958-156-03	GEAR, FL DRIVING
253	3-958-159-01	WORM	263	3-958-445-01	SPRING, TORSIONCOIL (CAP BRAKE)
254	3-958-460-01	SPRING, ONE-WAY	264	X-3943-888-1	BRAKE ASSY, CAP
255	3-958-160-01	PROPELLOR	265	X-3943-889-1	ARM ASSY, TENSION VEHICLE
256	3-958-155-01	BEARING, CAM MOTOR	266	3-958-361-01	BELT, TIMING
* 257	X-3943-884-1	CHASSIS ASSY, CAM MOTOR	267	3-958-448-01	WHEEL, TENSION
258	3-958-157-02	WHEEL, WORM	* 268	3-959-763-01	RETAINER
259	3-669-595-00	WASHER (2), STOPPER	269	3-958-163-04	SLIDER, MAIN
260	1-762-076-11	SWITCH, ROTARY	270	3-958-162-02	GEAR, UPPER/LOWER COMMUNICATION
261	3-958-161-07	GEAR, CAM	M903	X-3943-883-1	MOTOR ASSY, CAM

5-1-6. MECHANISM DECK ASSEMBLY-4



<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remarks</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remarks</u>
301	A-6739-102-A	RKB BLOCK ASSY		316	3-962-960-01	GEAR (T-K), IDLER	
302	X-3943-897-1	LEVER ASSY, TRIGGER		317	3-962-959-01	GEAR (S-K), IDLER	
303	3-958-485-02	GEAR (T), LOADING		318	3-958-533-01	CLAW, S WINDING	
304	3-960-449-01	SPRING (T), TORSION COIL		319	3-958-532-01	ARM, S WINDING	
305	X-3943-891-3	LEVER (T) ASSY, LOADING		320	3-958-534-01	SPRING, TORSION	
306	3-958-476-01	GEAR (S), LOADING		321	3-966-092-01	RING, RETAINING, SLIT WASHER	
307	3-960-448-01	SPRING (S), TORSION COIL		322	X-3943-886-1	TG1 ASSY	
308	X-3943-890-2	LEVER (S) ASSY, LOADING		323	3-958-492-01	SPRING (TG1), TENSION COIL	
309	3-958-529-01	SPRING (MOMENT), TENSION		324	A-6750-325-A	T BLOCK ASSY, SHUTTLE	
310	3-959-840-11	RUBBER, JOINT		325	X-3944-378-1	ROLLER ASSY, GUIDE	
311	3-960-720-01	SCREW		326	A-6750-316-A	SHUTTLE (S) BLOCK ASSY	
312	3-960-688-01	SPRING, LEAF (T), LOADING		327	3-958-504-01	ARM, FIXED RELEASE	
313	3-960-687-01	SPRING, LEAF (S), LOADING		329	3-965-178-01	SPRING	
314	X-3945-485-4	CHASSIS ASSY, MECHANICAL		M902	1-698-409-14	MOTOR, DC (CAPSTAN)	
315	3-669-595-00	WASHER (2), STOPPER					

5-2. ELECTRICAL PARTS LIST

NOTE:

When indicating parts by reference number, please include the board name.

The components identified by mark $\triangle$ or dotted line with mark $\triangle$ are critical for safety. Replace only with part number specified.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS:
uF: μ F
- RESISTORS
All resistors are in ohms.
METAL: metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F: nonflammable
- COILS
uH: μ H
- SEMICONDUCTORS
In each case, u: μ , for example:
uA...: μ A..., uPA..., μ PA...,
uPB..., μ PB..., uPC..., μ PC...,
uPD..., μ PD...

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
*	A-6790-203-A	DM-62 BOARD, COMPLETE ***** (Ref.No.: 3,000 Series)		*	A-6791-209-A	FR-119 BOARD, COMPLETE (720BZ) *****	
		< CONNECTOR >		*	A-6791-213-A	FR-119 BOARD, COMPLETE (325) *****	
CN440	1-695-947-11	CONNECTOR, BOARD TO BOARD 10P		*	A-6791-216-A	FR-119 BOARD, COMPLETE (475) ***** (Ref.No.: 3,000 Series)	
CN441	1-774-471-41	CONNECTOR, FFC/FPC 5P(570)					
		< RESISTOR >					
R440	1-216-073-00	METAL GLAZE 10K 5% 1/10W			3-972-888-01	HOLDER (85), FL	
R455	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W				< CAPACITOR >	
R456	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W		C400	1-163-809-11	CERAMIC CHIP 0.047uF 10% 25V	
R458	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W		C401	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	(570)
R459	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W					
				C403	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	(570)
R461	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W		C408	1-165-319-11	CERAMIC CHIP 0.1uF 50V	
R462	1-216-073-00	METAL GLAZE 10K 5% 1/10W		C471	1-126-924-11	ELECT 330uF 20% 10V	
R463	1-216-073-00	METAL GLAZE 10K 5% 1/10W					
		< SWITCH >		C472	1-126-916-11	ELECT 1000uF 20% 6.3V	
S441	1-571-977-11	SWITCH, TACTIL(EJECT)		C473	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
S442	1-571-977-11	SWITCH, TACTIL(REW)(570)		C474	1-125-705-11	CAPACITOR 0.22F 0 5.5V	
S443	1-571-977-11	SWITCH, TACTIL(FF)(570)		C475	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
S444	1-571-977-11	SWITCH, TACTIL(PAUSE)		C476	1-163-038-91	CERAMIC CHIP 0.1uF 25V	
S445	1-571-977-11	SWITCH, TACTIL(REC)					
S447	1-571-977-11	SWITCH, TACTIL(REW)(EXCEPT 570)		C477	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
S448	1-571-977-11	SWITCH, TACTIL(FF)(EXCEPT 570)		C478	1-164-159-21	CERAMIC 0.1uF 50V	
S449	1-571-977-11	SWITCH, TACTIL(STOP)(EXCEPT 570)		C479	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
S450	1-571-977-11	SWITCH, TACTIL(PLAY)(EXCEPT 570)		C480	1-163-099-00	CERAMIC CHIP 18PF 5% 50V	
				C481	1-163-231-11	CERAMIC CHIP 15PF 5% 50V	
*	A-6791-182-A	FR-119 BOARD, COMPLETE (720VP) *****		C482	1-163-038-91	CERAMIC CHIP 0.1uF 25V	
*	A-6791-184-A	FR-119 BOARD, COMPLETE (720UX) *****		C483	1-163-038-91	CERAMIC CHIP 0.1uF 25V	
*	A-6791-188-A	FR-119 BOARD, COMPLETE (717VC,720VC) *****		C485	1-163-038-91	CERAMIC CHIP 0.1uF 25V	
*	A-6791-191-A	FR-119 BOARD, COMPLETE (715B,720B) *****		C489	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
*	A-6791-193-A	FR-119 BOARD, COMPLETE (720EE) *****				< CONNECTOR >	
*	A-6791-195-A	FR-119 BOARD, COMPLETE (720EX) *****					
*	A-6791-197-A	FR-119 BOARD, COMPLETE (720NP) *****		* CN401	1-691-407-11	CONNECTOR, BOARD TO BOARD 10P	
*	A-6791-199-A	FR-119 BOARD, COMPLETE (720NC,725NC) *****		CN402	1-695-390-31	PIN, CONNECTOR (PC BOARD) 29P	
*	A-6791-202-A	FR-119 BOARD, COMPLETE (570EG) *****		CN403	1-506-470-11	PIN, CONNECTOR 5P (570)	
*	A-6791-205-A	FR-119 BOARD, COMPLETE (570EE) *****				< DIODE >	
*	A-6791-208-A	FR-119 BOARD, COMPLETE (720EG) *****		D401	8-719-108-12	DIODE RD9.1E-W (570)	
				D403	8-719-108-12	DIODE RD9.1E-W (570)	
				D405	8-719-056-07	DIODE SLR-342MC-A-47	
				D408	8-719-110-08	DIODE RD8.2ES-B2	
				D470	8-719-200-82	DIODE 11ES2	
				D471	8-719-200-82	DIODE 11ES2	
						< TERMINAL BOARD >	
				ET400	1-537-770-21	TERMINAL BOARD, GROUND (570)	

Ref. No.	Part No.	Description	Remarks
< IC >			
IC400	8-749-011-05	IC GP1U28X	
IC470	8-752-880-60	IC CXP82948-014Q (325,475,570,720EE,720EG)	
IC470	8-752-880-61	IC CXP82948-015Q (715B,717VC,720B,720BZ,720NC,720NP,720VC,720VP,725NC)	
IC470	8-752-880-62	IC CXP82948-016Q(720EX,720UX)	
IC471	8-759-248-87	IC MM1256XF-BE	
IC472	8-759-518-23	IC X24C04S8	
< JUMPER RESISTOR >			
JR401	1-216-295-91	CONDUCTOR, CHIP(2012)	
JR402	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR403	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR404	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR406	1-216-295-91	CONDUCTOR, CHIP(2012)	
JR407	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR408	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR410	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR411	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR412	1-216-295-91	CONDUCTOR, CHIP(2012)	
JR414	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR416	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR417	1-216-295-91	CONDUCTOR, CHIP(2012)	
JR419	1-216-295-91	CONDUCTOR, CHIP(2012)	
JR420	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR421	1-216-295-91	CONDUCTOR, CHIP(2012)	
JR422	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR423	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR425	1-216-295-91	CONDUCTOR, CHIP(2012)	
JR429	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR430	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR431	1-216-296-91	CONDUCTOR, CHIP(3216)	
< JUMPER RESISTOR >			
JS400	1-216-295-91	CONDUCTOR, CHIP(2012)	(570)
JS408	1-216-295-91	CONDUCTOR, CHIP(2012)	(570)
< COIL >			
L470	1-408-970-21	INDUCTOR 10uH	
< FLUORESCENT INDICATOR >			
ND400	1-517-590-11	TUBE, FLUORESCENT INDICATOR (EXCEPT 715B,720B,720BZ)	
ND400	1-517-590-21	TUBE, FLUORESCENT INDICATOR (715B,720B,720BZ)	
< JACK >			
PJ401	1-774-510-11	JACK, PIN 2P (LINE IN-2)	(570)
< TRANSISTOR >			
Q400	8-729-421-19	TRANSISTOR UN2213	
< RESISTOR >			
R400	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R401	1-216-022-00	METAL CHIP 75	5% 1/10W (570)
R403	1-216-041-00	METAL CHIP 470	5% 1/10W (570)

Ref. No.	Part No.	Description	Remarks
R405	1-216-029-00	METAL CHIP 150	5% 1/10W
R410	1-216-295-91	CONDUCTOR, CHIP(2012)	(570)
R411	1-216-069-00	METAL CHIP 6.8K	5% 1/10W
R412	1-216-075-00	METAL CHIP 12K	5% 1/10W
R413	1-216-075-00	METAL CHIP 12K	5% 1/10W
R414	1-216-057-00	METAL CHIP 2.2K	5% 1/10W
R415	1-216-057-00	METAL CHIP 2.2K	5% 1/10W
R416	1-216-061-00	METAL CHIP 3.3K	5% 1/10W
R418	1-216-073-00	METAL CHIP 10K	5% 1/10W
R419	1-216-073-00	METAL CHIP 10K	5% 1/10W
R420	1-216-073-00	METAL CHIP 10K	5% 1/10W
R421	1-216-073-00	METAL CHIP 10K	5% 1/10W
R422	1-216-073-00	METAL CHIP 10K	5% 1/10W
R423	1-216-073-00	METAL CHIP 10K	5% 1/10W
R424	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R472	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R473	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R474	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R475	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R476	1-216-073-00	METAL CHIP 10K	5% 1/10W
R477	1-216-073-00	METAL CHIP 10K	5% 1/10W
R478	1-216-113-00	METAL CHIP 470K	5% 1/10W
R479	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R480	1-216-113-00	METAL CHIP 470K	5% 1/10W
R481	1-249-413-11	CARBON 470	5% 1/4W F
R482	1-249-413-11	CARBON 470	5% 1/4W F
R483	1-249-417-11	CARBON 1K	5% 1/4W F
R486	1-216-095-00	METAL CHIP 82K	5% 1/10W
R487	1-216-113-00	METAL CHIP 470K	5% 1/10W
R488	1-216-295-91	CONDUCTOR, CHIP(2012)	
< SWITCH >			
S403	1-571-977-11	SWITCH, TACTIL(STANDBY/POWER ON)	
S404	1-571-977-11	SWITCH, TACTIL(TV/VTR)	
S405	1-571-977-11	SWITCH, TACTIL(PROGRAM:+)	
S406	1-571-977-11	SWITCH, TACTIL(PROGRAM:-)	
S407	1-571-977-11	SWITCH, TACTIL(RF CHANNEL)	
S409	1-571-977-11	SWITCH, TACTIL(TAPE SPEED)(EXCEPT 325)	
S410	1-571-977-11	SWITCH, TACTIL(EDIT)	
< VIBRATOR >			
X470	1-579-463-11	VIBRATOR, CRYSTAL 32.768kHz	
X471	1-579-930-12	VIBRATOR, CERAMIC	

*	A-6791-181-A	MA-286 BOARD, COMPLETE (720VP)	

*	A-6791-183-A	MA-286 BOARD, COMPLETE (720UX)	

*	A-6791-185-A	MA-286 BOARD, COMPLETE (717VC,720VC)	

*	A-6791-190-A	MA-286 BOARD, COMPLETE (715B,720B)	

*	A-6791-192-A	MA-286 BOARD, COMPLETE (720EE)	

*	A-6791-194-A	MA-286 BOARD, COMPLETE (720EX)	

*	A-6791-196-A	MA-286 BOARD, COMPLETE (720NP)	

*	A-6791-198-A	MA-286 BOARD, COMPLETE (720NC,725NC)	

*	A-6791-200-A	MA-286 BOARD, COMPLETE (570EG)	

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
*	A-6791-204-A	MA-286 BOARD, COMPLETE (570EE) *****		C221	1-163-251-11	CERAMIC CHIP 100PF 5% 50V (EXCEPT 325,475,720EE,720EG)	
*	A-6791-206-A	MA-286 BOARD, COMPLETE (720BZ) *****		C222	1-163-038-91	CERAMIC CHIP 0.1uF 25V (EXCEPT 325,475,720EE,720EG)	
*	A-6791-207-A	MA-286 BOARD, COMPLETE (720EG) *****		C223	1-126-154-11	ELECT 47uF 20% 6.3V	
*	A-6791-211-A	MA-286 BOARD, COMPLETE (325) *****		C224	1-162-306-11	CERAMIC 0.01uF 30% 16V	
*	A-6791-214-A	MA-286 BOARD, COMPLETE (475) *****		C225	1-163-235-11	CERAMIC CHIP 22PF 5% 50V	
		(Ref.No.: 2,000 Series)		C226	1-163-038-91	CERAMIC CHIP 0.1uF 25V	
	1-555-110-00	CABLE, PIN		C228	1-126-157-11	ELECT 10uF 20% 16V	
*	3-960-273-01	SPACER, TOP END		C229	1-162-306-11	CERAMIC 0.01uF 30% 16V	
*	3-960-274-01	SPACER, LED		C230	1-124-584-00	ELECT 100uF 20% 10V	
	A-8312-814-A	PIN, LEAD, COATING		C231	1-126-157-11	ELECT 10uF 20% 16V	
		< CAPACITOR >		C232	1-109-982-11	CERAMIC CHIP 1uF 10% 10V	
				C233	1-109-982-11	CERAMIC CHIP 1uF 10% 10V	
				C234	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
				C235	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
				C236	1-126-160-11	ELECT 1uF 20% 50V	
C100	1-124-635-00	ELECT 220uF 20% 6.3V		C237	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
C101	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V		C238	1-163-038-91	CERAMIC CHIP 0.1uF 25V	
C102	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V		C239	1-124-584-00	ELECT 100uF 20% 10V	
C103	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V		C240	1-109-982-11	CERAMIC CHIP 1uF 10% 10V	
C104	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V		C241	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V	
C105	1-164-232-11	CERAMIC CHIP 0.01uF 50V		C242	1-109-982-11	CERAMIC CHIP 1uF 10% 10V	
C107	1-130-489-00	MYLAR 0.033uF 5% 50V		C243	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
C108	1-137-441-11	FILM 0.027uF 5% 50V		C244	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	
C109	1-126-157-11	ELECT 10uF 20% 16V		C245	1-163-809-11	CERAMIC CHIP 0.047uF 10% 25V	
C130	1-163-031-11	CERAMIC CHIP 0.01uF 50V		C246	1-109-982-11	CERAMIC CHIP 1uF 10% 10V	
C131	1-163-031-11	CERAMIC CHIP 0.01uF 50V		C247	1-163-809-11	CERAMIC CHIP 0.047uF 10% 25V	
C132	1-124-589-11	ELECT 47uF 20% 16V		C248	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
C134	1-124-463-00	ELECT 0.1uF 20% 50V		C249	1-126-154-11	ELECT 47uF 20% 6.3V	
C160	1-163-038-91	CERAMIC CHIP 0.1uF 25V		C250	1-163-038-91	CERAMIC CHIP 0.1uF 25V	
C161	1-124-589-11	ELECT 47uF 20% 16V		C251	1-163-038-91	CERAMIC CHIP 0.1uF 25V	
C162	1-163-251-11	CERAMIC CHIP 100PF 5% 50V		C252	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C164	1-163-229-11	CERAMIC CHIP 12PF 5% 50V		C253	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	
C165	1-163-229-11	CERAMIC CHIP 12PF 5% 50V		C254	1-163-038-91	CERAMIC CHIP 0.1uF 25V	
C166	1-163-038-91	CERAMIC CHIP 0.1uF 25V		C255	1-163-038-91	CERAMIC CHIP 0.1uF 25V	
C167	1-124-589-11	ELECT 47uF 20% 16V		C291	1-126-157-11	ELECT 10uF 20% 16V (715B,720B,720BZ)	
C201	1-109-982-11	CERAMIC CHIP 1uF 10% 10V		C302	1-126-154-11	ELECT 47uF 20% 6.3V	
C202	1-163-809-11	CERAMIC CHIP 0.047uF 10% 25V		C303	1-126-160-11	ELECT 1uF 20% 50V (325,475,570)	
C204	1-163-031-11	CERAMIC CHIP 0.01uF 50V		C304	1-126-160-11	ELECT 1uF 20% 50V (570)	
C205	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V		C305	1-126-160-11	ELECT 1uF 20% 50V	
C206	1-163-031-11	CERAMIC CHIP 0.01uF 50V		C306	1-126-160-11	ELECT 1uF 20% 50V	
C207	1-163-031-11	CERAMIC CHIP 0.01uF 50V		C307	1-126-157-11	ELECT 10uF 20% 16V	
C208	1-163-241-11	CERAMIC CHIP 39PF 5% 50V		C308	1-124-229-00	ELECT 33uF 20% 10V	
C209	1-128-131-11	ELECT 22uF 20% 50V		C309	1-126-163-11	ELECT 4.7uF 20% 50V	
C210	1-163-131-00	CERAMIC CHIP 390PF 5% 50V		C310	1-163-011-11	CERAMIC CHIP 0.0015uF 10% 50V	
C211	1-163-239-11	CERAMIC CHIP 33PF 5% 50V		C311	1-163-011-11	CERAMIC CHIP 0.0015uF 10% 50V	
C212	1-163-275-11	CERAMIC CHIP 0.001uF 5% 50V		C312	1-137-370-11	FILM 0.01uF 5% 50V	
C213	1-163-125-00	CERAMIC CHIP 220PF 5% 50V		C313	1-126-157-11	ELECT 10uF 20% 16V	
C214	1-163-227-11	CERAMIC CHIP 10PF 0.5PF 50V		C314	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C215	1-163-031-11	CERAMIC CHIP 0.01uF 50V (EXCEPT 325)		C315	1-126-160-11	ELECT 1uF 20% 50V	
C215	1-163-227-11	CERAMIC CHIP 10PF 0.5PF 50V (325)		C317	1-126-163-11	ELECT 4.7uF 20% 50V	
C217	1-109-982-11	CERAMIC CHIP 1uF 10% 10V		C318	1-124-589-11	ELECT 47uF 20% 16V	
C218	1-163-251-11	CERAMIC CHIP 100PF 5% 50V		C361	1-126-960-11	ELECT 1uF 20% 50V (715B,717VC,720,725)	
C219	1-163-038-91	CERAMIC CHIP 0.1uF 25V		C362	1-126-960-11	ELECT 1uF 20% 50V (715B,717VC,720,725)	
C220	1-109-982-11	CERAMIC CHIP 1uF 10% 10V		C363	1-126-960-11	ELECT 1uF 20% 50V (715B,717VC,720,725)	
				C364	1-126-960-11	ELECT 1uF 20% 50V (715B,717VC,720,725)	

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
C367	1-126-960-11	ELECT	1uF 20% 50V (EXCEPT 325,475,570,720EE,720EG)	C512	1-124-584-00	ELECT	100uF 20% 10V
C368	1-126-960-11	ELECT	1uF 20% 50V (EXCEPT 325,475,570,720EE,720EG)	C513	1-163-234-11	CERAMIC CHIP	20PF 5% 50V
C369	1-126-964-11	ELECT	10uF 20% 50V (715B,717VC,720,725)	C514	1-163-234-11	CERAMIC CHIP	20PF 5% 50V
C370	1-126-964-11	ELECT	10uF 20% 50V (715B,717VC,720,725)	C518	1-124-465-00	ELECT	0.47uF 20% 50V
C371	1-126-964-11	ELECT	10uF 20% 50V (715B,717VC,720,725)	C519	1-164-489-11	CERAMIC CHIP	0.22uF 10% 16V
C372	1-126-964-11	ELECT	10uF 20% 50V (715B,717VC,720,725)	C520	1-163-038-91	CERAMIC CHIP	0.1uF 25V (325,475,570,715B,720B,720BZ,720EE,720EG)
C373	1-126-964-11	ELECT	10uF 20% 50V (715B,717VC,720,725)	C540	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C374	1-126-960-11	ELECT	1uF 20% 50V (715B,717VC,720,725)	C541	1-126-967-11	ELECT	47uF 20% 16V
C375	1-137-378-11	FILM	0.22uF 5% 50V (715B,717VC,720,725)	C542	1-126-967-11	ELECT	47uF 20% 16V
C376	1-137-437-11	FILM	0.0056uF 5% 50V (715B,717VC,720,725)	C544	1-126-935-11	ELECT	470uF 20% 6.3V
C377	1-126-967-11	ELECT	47uF 20% 50V (715B,717VC,720,725)	C574	1-126-964-11	ELECT	10uF 20% 50V (570EG,715B,717VC,720,725)
C378	1-126-964-11	ELECT	10uF 20% 50V (715B,717VC,720,725)	C575	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V (715B,717VC,720,725)
C379	1-126-961-11	ELECT	2.2uF 20% 50V (715B,717VC,720,725)	C576	1-126-964-11	ELECT	10uF 20% 50V (715B,717VC,720,725)
C380	1-126-964-11	ELECT	10uF 20% 50V (715B,717VC,720,725)	C577	1-126-964-11	ELECT	10uF 20% 50V (715B,717VC,720,725)
C381	1-126-967-11	ELECT	47uF 20% 50V (715B,717VC,720,725)	C578	1-126-157-11	ELECT	10uF 20% 16V (715B,717VC,720,725)
C382	1-137-437-11	FILM	0.0056uF 5% 50V (715B,717VC,720,725)	C579	1-126-157-11	ELECT	10uF 20% 16V (715B,717VC,720,725)
C383	1-137-378-11	FILM	0.22uF 5% 50V (715B,717VC,720,725)	C702	1-126-964-11	ELECT	10uF 20% 50V
C384	1-163-037-11	CERAMIC CHIP	0.022uF 10% 25V (715B,717VC,720,725)	C704	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V
C385	1-126-933-11	ELECT	100uF 20% 16V (715B,717VC,720,725)	C705	1-126-964-11	ELECT	10uF 20% 50V
C386	1-163-037-11	CERAMIC CHIP	0.022uF 10% 25V (715B,717VC,720,725)	C706	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C387	1-126-933-11	ELECT	100uF 20% 16V (715B,717VC,720,725)	C707	1-126-933-11	ELECT	100uF 20% 16V
C389	1-163-809-11	CERAMIC CHIP	0.047uF 10% 25V (715B,717VC,720,725)	C708	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C390	1-126-160-11	ELECT	1uF 20% 50V (715B,717VC,720,725)	C709	1-126-933-11	ELECT	100uF 20% 16V
C391	1-163-037-11	CERAMIC CHIP	0.022uF 10% 25V (715B,717VC,720,725)	C710	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C500	1-163-031-11	CERAMIC CHIP	0.01uF 50V	C711	1-126-967-11	ELECT	47uF 20% 16V
C501	1-124-584-00	ELECT	100uF 20% 10V	C712	1-163-031-11	CERAMIC CHIP	0.01uF 50V
C502	1-163-245-11	CERAMIC CHIP	56PF 5% 50V (325,475,570,715B,720B,720BZ,720EE,720EG)	C713	1-126-933-11	ELECT	100uF 20% 16V
C503	1-126-160-11	ELECT	1uF 20% 50V	C714	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C504	1-163-253-11	CERAMIC CHIP	120PF 5% 50V	C715	1-126-965-11	ELECT	22uF 20% 50V
C505	1-163-245-11	CERAMIC CHIP	56PF 5% 50V (325,475,570,715B,720B,720BZ,720EE,720EG)	C730	1-126-964-11	ELECT	10uF 20% 50V (715B,717VC,720,725)
C506	1-130-481-00	MYLAR	0.0068uF 5% 50V	C731	1-126-964-11	ELECT	10uF 20% 50V (715B,717VC,720,725)
C507	1-124-499-11	ELECT, NONPOLAR	1uF 20% 50V	C850	1-163-038-91	CERAMIC CHIP	0.1uF 25V (EXCEPT 570EE,720EE)
C508	1-137-372-11	FILM	0.022uF 5% 50V	C851	1-126-157-11	ELECT	10uF 20% 16V (EXCEPT 570EE,720EE)
C509	1-163-235-11	CERAMIC CHIP	22PF 5% 50V	C852	1-164-161-11	CERAMIC CHIP	0.0022uF 10% 100V (EXCEPT 570EE,720EE)
C510	1-163-231-11	CERAMIC CHIP	15PF 5% 50V	C853	1-163-989-11	CERAMIC CHIP	0.033uF 10% 25V (EXCEPT 570EE,720EE)
C511	1-163-031-11	CERAMIC CHIP	0.01uF 50V	C855	1-164-489-11	CERAMIC CHIP	0.22uF 10% 16V (EXCEPT 570EE,720EE)
				C856	1-163-038-91	CERAMIC CHIP	0.1uF 25V (EXCEPT 570EE,720EE)
				C922	1-124-584-00	ELECT	100uF 20% 10V (570EG,715B,717VC,720B,720BZ,720NP,720VC)
				C923	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V (570EG,715B,717VC,720B,720BZ,720NP,720VC)
				C924	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V (570EG,715B,717VC,720B,720BZ,720NP,720VC)

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
C925	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V (715B,717VC,720B,720BZ,720NP,720VC)		D545	8-719-109-97	DIODE RD6.8ES-B2	
C926	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V (570EG,715B,717VC,720B,720BZ,720NP,720VC)		D546	8-719-109-97	DIODE RD6.8ES-B2 (715B,717VC,720,725)	
C927	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V (570EG,715B,717VC,720B,720BZ,720NP,720VC)		D547	8-719-109-97	DIODE RD6.8ES-B2 (715B,717VC,720,725)	
C928	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V (570EG,715B,717VC,720B,720BZ,720NP,720VC)		D548	8-719-109-97	DIODE RD6.8ES-B2	
C930	1-126-967-11	ELECT 47uF 20% 16V (715B,717VC,720B,720BZ,720NP,720VC)		D549	8-719-109-97	DIODE RD6.8ES-B2	
C931	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V (715B,717VC,720B,720BZ,720NP,720VC)		D551	8-719-109-97	DIODE RD6.8ES-B2 (715B,717VC,720B,720BZ,720NP,720VC)	
C932	1-126-933-11	ELECT 100uF 20% 16V (715B,717VC,720B,720BZ,720NP,720VC)		D552	8-719-921-86	DIODE MTZJ-13	
C933	1-126-964-11	ELECT 10uF 20% 50V (570EG,715B,717VC,720B,720BZ,720NP,720VC)		D553	8-719-109-97	DIODE RD6.8ES-B2	
C934	1-126-964-11	ELECT 10uF 20% 50V (570EG,715B,717VC,720B,720BZ,720NP,720VC)		D554	8-719-109-97	DIODE RD6.8ES-B2	
C935	1-126-964-11	ELECT 10uF 20% 50V (570EG,715B,717VC,720B,720BZ,720NP,720VC)		D700	8-719-911-19	DIODE 1SS119	
C936	1-126-964-11	ELECT 10uF 20% 50V (715B,717VC,720B,720BZ,720NP,720VC)		D701	8-719-800-76	DIODE 1SS226	
C937	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V (715B,717VC,720B,720BZ,720NP,720VC)		D702	8-719-982-26	DIODE MTZJ-33B	
C938	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V (715B,717VC,720B,720BZ,720NP,720VC)		D703	8-719-109-85	DIODE RD5.1ES-B2	
C951	1-163-017-00	CERAMIC CHIP 0.0047uF 5% 50V (EXCEPT 325,475,570EE,720EG,720EE)		D704	8-719-911-19	DIODE 1SS119	
< CONNECTOR >				D930	8-719-200-82	DIODE 11ES2 (715B,717VC,720B,720BZ,720NP,720VC)	
CN101	1-506-470-11	PIN, CONNECTOR 5P		D932	8-719-109-97	DIODE RD6.8ES-B2 (EXCEPT 325,475,570EE,720EE,720EG)	
* CN102	1-766-538-11	CONNECTOR, BOARD TO BOARD 8P		D933	8-719-109-97	DIODE RD6.8ES-B2 (EXCEPT 325,475,570EE,720EE,720EG)	
* CN103	1-766-537-11	CONNECTOR (HMD) 5P		D934	8-719-109-97	DIODE RD6.8ES-B2 (715B,717VC,720B,720BZ,720NP,720VC)	
* CN104	1-766-716-11	CONNECTOR, BOARD TO BOARD 3P		D935	8-719-109-97	DIODE RD6.8ES-B2 (EXCEPT 325,475,570EE,720EE,720EG)	
CN161	1-506-470-11	PIN, CONNECTOR 5P (570)		D936	8-719-109-97	DIODE RD6.8ES-B2 (EXCEPT 325,475,570EE,720EE,720EG)	
CN163	1-695-352-11	PIN, CONNECTOR (PC BOARD) 29P		D937	8-719-109-97	DIODE RD6.8ES-B2 (715B,717VC,720B,720BZ,720NP,720VC)	
CN164	1-506-469-11	PIN, CONNECTOR 4P		D938	8-719-109-97	DIODE RD6.8ES-B2 (715B,717VC,720B,720BZ,720NP,720VC)	
CN305	1-573-852-11	CONNECTOR, BOARD TO BOARD 20P		D939	8-719-109-97	DIODE RD6.8ES-B2 (715B,717VC,720B,720BZ,720NP,720VC)	
CN306	1-766-718-11	CONNECTOR, BOARD TO BOARD 17P		D940	8-719-109-97	DIODE RD6.8ES-B2 (EXCEPT 325,475,570EE,720EE,720EG)	
CN540	1-568-016-21	SOCKET, PIN 21P(LINE-1(TV))		D941	8-719-109-97	DIODE RD6.8ES-B2 (EXCEPT 325,475,570EE,720EE,720EG)	
CN600	1-569-338-11	CONNECTOR, BOARD TO BOARD 19P		D942	8-719-109-97	DIODE RD6.8ES-B2 (EXCEPT 325,475,570EE,720EE,720EG)	
CN930	1-568-016-21	SOCKET, PIN 21P(DECODER/LINE-2 IN) (EXCEPT 325,475,570EE,720EE,720EG)		D943	8-719-109-97	DIODE RD6.8ES-B2 (EXCEPT 325,475,570EE,720EE,720EG)	
< TRIMMER >				D944	8-719-109-97	DIODE RD6.8ES-B2	
CT500	1-141-334-11	CAP, TRIMMER 30PF		D945	8-719-982-09	DIODE MTZJ-T-77-4.3 (EXCEPT 325,475,570EE,720EE,720EG)	
< DIODE >				< FILTER >			
D100	8-719-048-26	DIODE GL528V1		FL540	1-236-163-11	ENCAPSULATED COMPONENT (715B,717VC,720,725)	
D107	8-719-911-19	DIODE 1SS119		FL541	1-236-163-11	ENCAPSULATED COMPONENT (715B,717VC,720,725)	
D108	8-719-200-82	DIODE 11ES2		FL542	1-236-163-11	ENCAPSULATED COMPONENT (715B,717VC,720,725)	
D131	8-719-200-82	DIODE 11ES2		FL543	1-236-163-11	ENCAPSULATED COMPONENT	
D160	8-719-200-82	DIODE 11ES2		FL544	1-236-163-11	ENCAPSULATED COMPONENT	
D301	8-719-911-19	DIODE 1SS119 (325,475,570)		FL545	1-236-163-11	ENCAPSULATED COMPONENT (715B,717VC,720,725)	
D361	8-719-911-19	DIODE 1SS119		FL930	1-236-163-11	ENCAPSULATED COMPONENT (EXCEPT 325,475,570EE,720EE,720EG)	
D501	8-719-911-19	DIODE 1SS119		FL931	1-236-163-11	ENCAPSULATED COMPONENT (EXCEPT 325,475,570EE,720EE,720EG)	
D502	8-719-911-19	DIODE 1SS119		FL932	1-236-163-11	ENCAPSULATED COMPONENT (715B,717VC,720B,720BZ,720NP,720VC)	
D503	8-719-911-19	DIODE 1SS119		FL933	1-236-163-11	ENCAPSULATED COMPONENT (715B,717VC,720B,720BZ,720NP,720VC)	
D540	8-719-109-97	DIODE RD6.8ES-B2					
D541	8-719-109-97	DIODE RD6.8ES-B2					
D542	8-719-109-97	DIODE RD6.8ES-B2 (715B,717VC,720,725)					
D543	8-719-109-97	DIODE RD6.8ES-B2					
D544	8-719-109-97	DIODE RD6.8ES-B2 (715B,717VC,720,725)					

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
< IC >				JR031	1-216-296-91	CONDUCTOR, CHIP(3216)	
IC100	8-759-702-02	IC NJM062M		JR032	1-216-295-91	CONDUCTOR, CHIP(2012)	
IC130	8-759-353-59	IC LB1643		JR033	1-216-296-91	CONDUCTOR, CHIP(3216)	
IC160	8-752-880-93	IC CXP87852-008Q (325)		JR034	1-216-295-91	CONDUCTOR, CHIP(2012)	
IC160	8-752-880-94	IC CXP87852-009Q (475EG,570EE,720EE)		JR035	1-216-296-91	CONDUCTOR, CHIP(3216)	
IC160	8-752-880-95	IC CXP87852-010Q (EXCEPT 325,475,570EE,720EE)		JR036	1-216-295-91	CONDUCTOR, CHIP(2012)	
IC201	8-759-439-48	IC LA71511M		JR037	1-216-296-91	CONDUCTOR, CHIP(3216)	
IC202	8-759-439-50	IC LC89977M-TE-L		JR038	1-216-296-91	CONDUCTOR, CHIP(3216)	
IC291	1-801-655-11	IC SECAM MODULE (715B,720B,720BZ)		JR039	1-216-296-91	CONDUCTOR, CHIP(3216)	
IC360	8-759-445-21	IC TDA9603H/N2,518 (715B,717VC,720,725)		JR040	1-216-295-91	CONDUCTOR, CHIP(2012)	
IC361	8-759-708-05	IC NJM78L05A (715B,717VC,720,725)		JR041	1-216-296-91	CONDUCTOR, CHIP(3216)	
IC500	8-752-433-84	IC LC74790M-VSX8903-TLM (EXCEPT 325,475,570,720EE,720EG)		JR042	1-216-296-91	CONDUCTOR, CHIP(3216)	
IC500	8-759-433-86	IC LC74761M-9624-TLM (325,475,570,720EE,720EG)		JR043	1-216-295-91	CONDUCTOR, CHIP(2012)	
IC570	8-759-909-71	IC BA4558F (715B,717VC,720,725)		JR044	1-216-295-91	CONDUCTOR, CHIP(2012)	
IC850	8-759-289-73	IC SDA5649X-GEG (EXCEPT 570EE,720EE)		JR045	1-216-296-91	CONDUCTOR, CHIP(3216)	
IC920	8-759-438-16	IC STV6400D (570EG,715B,717VC,720B,720BZ,720NP,720VC)		JR046	1-216-296-91	CONDUCTOR, CHIP(3216)	
IC930	8-759-296-72	IC PQ12SZ5U (715B,717VC,720B,720BZ,720NP,720VC)		JR047	1-216-295-91	CONDUCTOR, CHIP(2012)	
IC931	8-759-932-64	IC BU4052BF (570EG,715B,717VC,720B,720BZ,720NP,720VC)		JR048	1-216-296-91	CONDUCTOR, CHIP(3216)	
< JACK >				JR049	1-216-296-91	CONDUCTOR, CHIP(3216)	
J540	1-565-319-71	JACK, PIN 2P(AUDIO OUT) (715B,717VC,720,725)		JR050	1-216-295-91	CONDUCTOR, CHIP(2012)	
< JUMPER RESISTOR >				JR051	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR001	1-216-296-91	CONDUCTOR, CHIP(3216)		JR052	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR002	1-216-296-91	CONDUCTOR, CHIP(3216)		JR053	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR003	1-216-296-91	CONDUCTOR, CHIP(3216)		JR054	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR004	1-216-296-91	CONDUCTOR, CHIP(3216)		JR055	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR005	1-216-295-91	CONDUCTOR, CHIP(2012)		JR056	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR006	1-216-296-91	CONDUCTOR, CHIP(3216)		JR057	1-216-295-91	CONDUCTOR, CHIP(2012)	
JR007	1-216-295-91	CONDUCTOR, CHIP(2012)		JR058	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR008	1-216-295-91	CONDUCTOR, CHIP(2012)		JR059	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR009	1-216-295-91	CONDUCTOR, CHIP(2012)		JR060	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR010	1-216-295-91	CONDUCTOR, CHIP(2012)		JR061	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR011	1-216-295-91	CONDUCTOR, CHIP(2012)		JR062	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR012	1-216-295-91	CONDUCTOR, CHIP(2012)		JR063	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR013	1-216-295-91	CONDUCTOR, CHIP(2012)		JR064	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR014	1-216-295-91	CONDUCTOR, CHIP(2012)		JR065	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR015	1-216-295-91	CONDUCTOR, CHIP(2012)		JR066	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR016	1-216-295-91	CONDUCTOR, CHIP(2012)		JR067	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR017	1-216-296-91	CONDUCTOR, CHIP(3216)		JR068	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR018	1-216-295-91	CONDUCTOR, CHIP(2012)		JR069	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR019	1-216-296-91	CONDUCTOR, CHIP(3216)		JR070	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR020	1-216-296-91	CONDUCTOR, CHIP(3216)		JR071	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR021	1-216-295-91	CONDUCTOR, CHIP(2012)		JR072	1-216-295-91	CONDUCTOR, CHIP(2012)	
JR022	1-216-295-91	CONDUCTOR, CHIP(2012)		JR073	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR023	1-216-295-91	CONDUCTOR, CHIP(2012)		JR074	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR024	1-216-295-91	CONDUCTOR, CHIP(2012)		JR075	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR025	1-216-295-91	CONDUCTOR, CHIP(2012)		JR076	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR026	1-216-296-91	CONDUCTOR, CHIP(3216)		JR077	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR027	1-216-295-91	CONDUCTOR, CHIP(2012)		JR078	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR028	1-216-296-91	CONDUCTOR, CHIP(3216)		JR079	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR029	1-216-295-91	CONDUCTOR, CHIP(2012)		JR080	1-216-295-91	CONDUCTOR, CHIP(2012)	
JR030	1-216-296-91	CONDUCTOR, CHIP(3216)		JR084	1-216-295-91	CONDUCTOR, CHIP(2012)	
< JUMPER RESISTOR >				JS201	1-216-295-91	CONDUCTOR, CHIP(2012)	
JR026	1-216-296-91	CONDUCTOR, CHIP(3216)		JS291	1-216-295-91	CONDUCTOR, CHIP(2012)(715B,720B,720BZ)	
JR027	1-216-295-91	CONDUCTOR, CHIP(2012)		JS292	1-216-295-91	CONDUCTOR, CHIP(2012) (EXCEPT 715B,720B,720BZ)	
JR028	1-216-296-91	CONDUCTOR, CHIP(3216)		JS380	1-216-295-91	CONDUCTOR, CHIP(2012) (715B,717VC,720,725)	
JR029	1-216-295-91	CONDUCTOR, CHIP(2012)		JS381	1-216-295-91	CONDUCTOR, CHIP(2012)(325,475,570)	

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
JS385	1-216-295-91	CONDUCTOR, CHIP(2012)(325,475,570)		Q203	8-729-421-19	TRANSISTOR UN2213 (EXCEPT 325)	
JS389	1-216-295-91	CONDUCTOR, CHIP(2012)		Q205	8-729-421-19	TRANSISTOR UN2213 (715B,720B,720BZ)	
		(715B,717VC,720,725)		Q208	8-729-422-27	TRANSISTOR 2SD601A-Q	
JS390	1-216-295-91	CONDUCTOR, CHIP(2012)(325,475,570)		Q209	8-729-216-22	TRANSISTOR 2SA1162-G	
JS392	1-216-295-91	CONDUCTOR, CHIP(2012)(570EG)		Q210	8-729-422-27	TRANSISTOR 2SD601A-Q	
JS393	1-216-296-91	CONDUCTOR, CHIP(3216)(570EG)					
JS540	1-216-296-91	CONDUCTOR, CHIP(3216)(325,475,570)		Q211	8-729-422-27	TRANSISTOR 2SD601A-Q	
JS541	1-216-295-91	CONDUCTOR, CHIP(2012)(325,475,570)		Q291	8-729-421-19	TRANSISTOR UN2213 (715B,720B,720BZ)	
JS700	1-216-296-91	CONDUCTOR, CHIP(3216)(720EE)		Q292	8-729-901-06	TRANSISTOR DTA144EK (715B,720B,720BZ)	
JS701	1-216-295-91	CONDUCTOR, CHIP(2012)(720EE)		Q293	8-729-421-19	TRANSISTOR UN2213 (715B,720B,720BZ)	
JS805	1-216-295-91	CONDUCTOR, CHIP(2012)		Q301	8-729-422-27	TRANSISTOR 2SD601A-Q	
JS924	1-216-055-00	METAL CHIP 1.8K 5% 1/10W (570EG)		Q361	8-729-422-27	TRANSISTOR 2SD601A-Q	
JS925	1-216-295-91	CONDUCTOR, CHIP(2012)(570EG)				(715B,717VC,720,725)	
JS930	1-216-295-91	CONDUCTOR, CHIP(2012)(570EG)		Q362	8-729-422-27	TRANSISTOR 2SD601A-Q	
JS931	1-216-295-91	CONDUCTOR, CHIP(2012)				(715B,717VC,720,725)	
		(715B,720B,720BZ,720NP,720VC)		Q362	8-729-424-67	TRANSISTOR UN2216 (325,475,570)	
JS932	1-216-296-91	CONDUCTOR, CHIP(3216)(570EG)		Q363	8-729-422-27	TRANSISTOR 2SD601A-Q	
		< COIL >				(715B,717VC,720,725)	
L101	1-408-982-11	INDUCTOR 100uH		Q364	8-729-216-22	TRANSISTOR 2SA1162-G	
L161	1-408-970-21	INDUCTOR 10uH				(715B,717VC,720,725)	
L201	1-408-977-21	INDUCTOR 39uH		Q500	8-729-216-22	TRANSISTOR 2SA1162-G	
L202	1-408-982-11	INDUCTOR 100uH		Q501	8-729-216-22	TRANSISTOR 2SA1162-G	
L203	1-410-330-31	INDUCTOR 22uH (715B,720B,720BZ)		Q502	8-729-216-22	TRANSISTOR 2SA1162-G	
				Q505	8-729-216-22	TRANSISTOR 2SA1162-G	
L204	1-408-970-21	INDUCTOR 10uH				(325,475,570,715B,720B,720BZ,720EE,720EG)	
L205	1-408-982-11	INDUCTOR 100uH		Q506	8-729-422-27	TRANSISTOR 2SD601A-Q	
L206	1-408-970-21	INDUCTOR 10uH				(325,475,570,715B,720B,720BZ,720EE,720EG)	
L207	1-408-970-21	INDUCTOR 10uH		Q540	8-729-421-19	TRANSISTOR UN2213	
L291	1-408-982-11	INDUCTOR 100uH (715B,720B,720BZ)		Q541	8-729-901-06	TRANSISTOR DTA144EK	
				Q542	8-729-216-22	TRANSISTOR 2SA1162-G	
L292	1-410-328-31	INDUCTOR 10uH (715B,720B,720BZ)		Q571	8-729-422-27	TRANSISTOR 2SD601A-Q	
L301	1-408-982-11	INDUCTOR 100uH				(570EG,715B,717VC,720,725)	
L361	1-408-982-11	INDUCTOR 100uH (715B,717VC,720,725)		Q702	8-729-027-56	TRANSISTOR DTC143TKA-T146	
L500	1-408-982-11	INDUCTOR 100uH		Q703	8-729-216-22	TRANSISTOR 2SA1162-G	
L501	1-408-982-11	INDUCTOR 100uH		Q704	8-729-421-19	TRANSISTOR UN2213	
				Q705	8-729-216-22	TRANSISTOR 2SA1162-G	
L502	1-410-506-11	INDUCTOR 5.6uH		Q707	8-729-173-38	TRANSISTOR 2SA733-K	
L503	1-410-513-11	INDUCTOR 22uH		Q708	8-729-012-31	TRANSISTOR 2SC4040-TL2-Q	
		(325,475,570,715B,720B,720BZ,720EE,720EG)		Q709	8-729-421-19	TRANSISTOR UN2213	
L540	1-408-982-11	INDUCTOR 100uH		Q710	8-729-216-22	TRANSISTOR 2SA1162-G	
L700	1-408-982-11	INDUCTOR 100uH		Q730	8-729-027-56	TRANSISTOR DTC143TKA-T146	
L701	1-408-962-21	INDUCTOR 2.2uH				(715B,717VC,720,725)	
L702	1-408-962-21	INDUCTOR 2.2uH		Q731	8-729-027-56	TRANSISTOR DTC143TKA-T146	
L703	1-408-962-21	INDUCTOR 2.2uH				(715B,717VC,720,725)	
L930	1-408-982-11	INDUCTOR 100uH		Q850	8-729-216-22	TRANSISTOR 2SA1162-G	
		(715B,717VC,720B,720BZ,720NP,720VC)				(EXCEPT 570EE,720EE)	
L931	1-408-982-11	INDUCTOR 100uH		Q930	8-729-421-19	TRANSISTOR UN2213	
		(570EG,715B,717VC,720,725)				(570EG,715B,717VC,720B,720BZ,720NP,720VC)	
		< PHOTO INTERRUPTER >		Q931	8-729-421-19	TRANSISTOR UN2213	
PH100	8-749-010-19	PHOTO INTERRUPTER GP3S113				(570EG,715B,717VC,720B,720BZ,720NP,720VC)	
PH101	8-749-010-20	PHOTO INTERRUPTER GP3S114		Q932	8-729-216-22	TRANSISTOR 2SA1162-G	
						(715B,717VC,720B,720BZ,720NP,720VC)	
		< IC LINK >				< RESISTOR >	
△PS130	1-533-586-31	LINK, IC 0.315A		R100	1-249-400-11	CARBON 39 5% 1/4W F	
		< TRANSISTOR >		R101	1-249-400-11	CARBON 39 5% 1/4W F	
Q100	8-729-025-92	PHOTO TRANSISTOR PT380F		R102	1-249-421-11	CARBON 2.2K 5% 1/4W F	
Q101	8-729-025-92	PHOTO TRANSISTOR PT380F		R103	1-216-107-00	METAL CHIP 270K 5% 1/10W	
Q102	8-729-281-53	TRANSISTOR 2SC1815-GR		R104	1-247-889-00	CARBON 270K 5% 1/4W	
Q201	8-729-230-49	TRANSISTOR 2SC2712-YG					
Q202	8-729-230-49	TRANSISTOR 2SC2712-YG					

Note : The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description			Remarks	Ref. No.	Part No.	Description			Remarks
R105	1-249-413-11	CARBON	470	5%	1/4W F	R225	1-216-017-91	METAL GLAZE	47	5%	1/10W
R106	1-216-089-91	METAL GLAZE	47K	5%	1/10W	R228	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R107	1-216-089-91	METAL GLAZE	47K	5%	1/10W	R229	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R108	1-216-295-91	CONDUCTOR, CHIP(2012)				R230	1-216-045-00	METAL CHIP	680	5%	1/10W
R109	1-249-421-11	CARBON	2.2K	5%	1/4W F	R231	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R110	1-249-421-11	CARBON	2.2K	5%	1/4W F	R233	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R111	1-216-103-00	METAL CHIP	180K	5%	1/10W	R235	1-216-073-00	METAL CHIP	10K	5%	1/10W
R112	1-249-436-11	CARBON	39K	5%	1/4W	R236	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R113	1-216-073-00	METAL CHIP	10K	5%	1/10W	R239	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R114	1-216-073-00	METAL CHIP	10K	5%	1/10W	R240	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R115	1-216-089-91	METAL GLAZE	47K	5%	1/10W	R243	1-216-061-00	METAL CHIP	3.3K	5%	1/10W (EXCEPT 325)
R116	1-216-089-91	METAL GLAZE	47K	5%	1/10W	R291	1-216-073-00	METAL CHIP	10K	5%	1/10W (715B,720B,720BZ)
R117	1-216-089-91	METAL GLAZE	47K	5%	1/10W	R292	1-216-073-00	METAL CHIP	10K	5%	1/10W (715B,720B,720BZ)
R118	1-216-089-91	METAL GLAZE	47K	5%	1/10W	R293	1-216-073-00	METAL CHIP	10K	5%	1/10W (715B,720B,720BZ)
R130	1-216-089-91	METAL GLAZE	47K	5%	1/10W	R301	1-216-065-00	METAL CHIP	4.7K	5%	1/10W (325,475,570EE)
R131	1-216-081-00	METAL CHIP	22K	5%	1/10W	R301	1-216-295-91	CONDUCTOR, CHIP(2012)			(EXCEPT 325,475,570EE)
R132	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	R302	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R133	1-216-073-00	METAL CHIP	10K	5%	1/10W	R303	1-216-079-00	METAL CHIP	18K	5%	1/10W (325,475,570)
R160	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	R304	1-216-069-00	METAL CHIP	6.8K	5%	1/10W (570)
R161	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	R305	1-216-069-00	METAL CHIP	6.8K	5%	1/10W (325,475,570)
R162	1-216-089-91	METAL GLAZE	47K	5%	1/10W	R306	1-216-073-00	METAL CHIP	10K	5%	1/10W
R163	1-216-073-00	METAL CHIP	10K	5%	1/10W	R307	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R164	1-216-089-91	METAL GLAZE	47K	5%	1/10W	R308	1-216-067-00	METAL CHIP	5.6K	5%	1/10W (570)
R165	1-216-041-00	METAL CHIP	470	5%	1/10W	R309	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R166	1-216-041-00	METAL CHIP	470	5%	1/10W	R310	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R167	1-216-049-91	METAL GLAZE	1K	5%	1/10W	R311	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R168	1-216-025-91	METAL GLAZE	100	5%	1/10W	R312	1-216-079-00	METAL CHIP	18K	5%	1/10W
R169	1-216-025-91	METAL GLAZE	100	5%	1/10W	R313	1-216-109-00	METAL CHIP	330K	5%	1/10W
R170	1-216-025-91	METAL GLAZE	100	5%	1/10W	R314	1-216-035-00	METAL CHIP	270	5%	1/10W
R171	1-216-025-91	METAL GLAZE	100	5%	1/10W	R315	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R172	1-216-073-00	METAL CHIP	10K	5%	1/10W	R316	1-216-073-00	METAL CHIP	10K	5%	1/10W
R173	1-216-073-00	METAL CHIP	10K	5%	1/10W	R318	1-216-075-00	METAL CHIP	12K	5%	1/10W
R174	1-216-041-00	METAL CHIP	470	5%	1/10W	R320	1-216-047-91	METAL GLAZE	820	5%	1/10W
R175	1-216-041-00	METAL CHIP	470	5%	1/10W	R330	1-249-438-11	CARBON	56K	5%	1/4W (325,475,570)
R176	1-216-073-00	METAL CHIP	10K	5%	1/10W	R330	1-249-439-11	CARBON	68K	5%	1/4W (715B,717VC,720,725)
R177	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	R331	1-249-438-11	CARBON	56K	5%	1/4W (570)
R179	1-216-073-00	METAL CHIP	10K	5%	1/10W	R332	1-249-439-11	CARBON	68K	5%	1/4W (325,475,570)
R180	1-216-089-91	METAL GLAZE	47K	5%	1/10W	R361	1-216-033-00	METAL CHIP	220	5%	1/10W
R181	1-216-097-91	METAL GLAZE	100K	5%	1/10W	R362	1-216-033-00	METAL CHIP	220	5%	1/10W (715B,717VC,720,725)
R182	1-249-417-11	CARBON	1K	5%	1/4W F	R363	1-216-033-00	METAL CHIP	220	5%	1/10W (715B,717VC,720,725)
R183	1-249-388-11	CARBON	3.9	5%	1/6W F	R364	1-216-049-91	METAL GLAZE	1K	5%	1/10W (715B,717VC,720,725)
R184	1-249-388-11	CARBON	3.9	5%	1/6W F	R365	1-216-049-91	METAL GLAZE	1K	5%	1/10W (715B,717VC,720,725)
R185	1-249-388-11	CARBON	3.9	5%	1/6W F	R366	1-216-049-91	METAL GLAZE	1K	5%	1/10W (715B,717VC,720,725)
R186	1-249-413-11	CARBON	470	5%	1/4W F	R367	1-216-049-91	METAL GLAZE	1K	5%	1/10W (715B,717VC,720,725)
R187	1-249-413-11	CARBON	470	5%	1/4W F	R368	1-216-133-00	METAL CHIP	3.3M	5%	1/10W (715B,717VC,720,725)
R201	1-216-041-00	METAL CHIP	470	5%	1/10W						
R202	1-216-069-00	METAL CHIP	6.8K	5%	1/10W						
R203	1-216-049-91	METAL GLAZE	1K	5%	1/10W						
R204	1-216-047-91	METAL GLAZE	820	5%	1/10W						
R205	1-216-037-00	METAL CHIP	330	5%	1/10W						
R206	1-216-037-00	METAL CHIP	330	5%	1/10W						
R207	1-216-073-00	METAL CHIP	10K	5%	1/10W						
R208	1-216-069-00	METAL CHIP	6.8K	5%	1/10W						
R210	1-216-295-91	CONDUCTOR, CHIP(2012)									
R218	1-216-065-00	METAL CHIP	4.7K	5%	1/10W						
R219	1-216-053-00	METAL CHIP	1.5K	5%	1/10W						
R220	1-216-039-00	METAL CHIP	390	5%	1/10W (325)						
R222	1-216-051-00	METAL CHIP	1.2K	5%	1/10W						
R223	1-249-401-11	CARBON	47	5%	1/4W F						
R224	1-249-401-11	CARBON	47	5%	1/4W F (EXCEPT 325,475,720EE,720EG)						

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
R369	1-216-689-11	METAL CHIP	39K 0.5% 1/10W (715B,717VC,720,725)	R521	1-216-025-91	METAL GLAZE	100 5% 1/10W (325,475,570,715B,720B,720BZ,720EE,720EG)
R370	1-216-061-00	METAL CHIP	3.3K 5% 1/10W (715B,717VC,720,725)	R522	1-216-049-91	METAL GLAZE	1K 5% 1/10W (325,475,570,715B,720B,720BZ,720EE,720EG)
R371	1-208-820-11	METAL GLAZE	39K 0.50% 1/10W (715B,717VC,720,725)	R540	1-249-403-11	CARBON	68 5% 1/4W F
R372	1-216-061-00	METAL CHIP	3.3K 5% 1/10W (715B,717VC,720,725)	R541	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R373	1-216-689-11	METAL CHIP	39K 0.5% 1/10W (715B,717VC,720,725)	R542	1-216-037-00	METAL CHIP	330 5% 1/10W
R374	1-216-295-91	CONDUCTOR, CHIP(2012)	(715B,717VC,720,725)	R544	1-249-408-11	CARBON	180 5% 1/4W F
R375	1-216-049-91	METAL GLAZE	1K 5% 1/10W (715B,717VC,720,725)	R545	1-216-295-91	CONDUCTOR, CHIP(2012)	
R376	1-216-097-91	METAL GLAZE	100K 5% 1/10W (715B,717VC,720,725)	R547	1-249-407-11	CARBON	150 5% 1/4W F
R377	1-216-097-91	METAL GLAZE	100K 5% 1/10W (715B,717VC,720,725)	R548	1-216-049-91	METAL GLAZE	1K 5% 1/10W
R378	1-216-083-00	METAL CHIP	27K 5% 1/10W (715B,717VC,720,725)	R549	1-216-022-00	METAL CHIP	75 5% 1/10W
R379	1-216-073-00	METAL CHIP	10K 5% 1/10W (715B,717VC,720,725)	R550	1-216-041-00	METAL CHIP	470 5% 1/10W
R382	1-216-081-00	METAL CHIP	22K 5% 1/10W (715B,717VC,720,725)	R551	1-216-041-00	METAL CHIP	470 5% 1/10W (715B,717VC,720,725)
R383	1-216-081-00	METAL CHIP	22K 5% 1/10W (715B,717VC,720,725)	R552	1-216-041-00	METAL CHIP	470 5% 1/10W
R384	1-216-081-00	METAL CHIP	22K 5% 1/10W (EXCEPT 325,475,570,720EE,720EG)	R553	1-216-041-00	METAL CHIP	470 5% 1/10W
R385	1-216-081-00	METAL CHIP	22K 5% 1/10W (EXCEPT 325,475,570,720EE,720EG)	R555	1-216-065-00	METAL CHIP	4.7K 5% 1/10W (715B,717VC,720,725)
R386	1-216-295-91	CONDUCTOR, CHIP(2012)	(715B,717VC,720,725)	R559	1-216-065-00	METAL CHIP	4.7K 5% 1/10W (715B,717VC,720,725)
R387	1-216-295-91	CONDUCTOR, CHIP(2012)	(715B,717VC,720,725)	R571	1-216-075-00	METAL CHIP	12K 5% 1/10W (570EG,715B,717VC,720,725)
R388	1-216-295-91	CONDUCTOR, CHIP(2012)	(715B,717VC,720,725)	R572	1-216-079-00	METAL CHIP	18K 5% 1/10W (570EG,715B,717VC,720,725)
R389	1-216-049-91	METAL GLAZE	1K 5% 1/10W (715B,717VC,720,725)	R573	1-249-438-11	CARBON	56K 5% 1/4W (715B,717VC,720,725)
R399	1-216-049-91	METAL GLAZE	1K 5% 1/10W (715B,717VC,720,725)	R574	1-216-091-00	METAL CHIP	56K 5% 1/10W (715B,717VC,720,725)
R500	1-216-041-00	METAL CHIP	470 5% 1/10W (570EG,715B,717VC,720B,720BZ,720NP,720VC)	R575	1-216-055-00	METAL CHIP	1.8K 5% 1/10W (570EG,715B,717VC,720,725)
R500	1-216-049-91	METAL GLAZE	1K 5% 1/10W (325,475,570EE,720EE,720EG,720EX,720NC,720UX,720VP,725NC)	R700	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R501	1-216-057-00	METAL CHIP	2.2K 5% 1/10W	R701	1-216-049-91	METAL GLAZE	1K 5% 1/10W
R502	1-216-057-00	METAL CHIP	2.2K 5% 1/10W	R702	1-216-073-00	METAL CHIP	10K 5% 1/10W
R504	1-216-049-91	METAL GLAZE	1K 5% 1/10W (325,475,570,715B,720B,720BZ,720EE,720EG)	R704	1-216-025-91	METAL GLAZE	100 5% 1/10W
R505	1-216-053-00	METAL CHIP	1.5K 5% 1/10W	R707	1-216-083-00	METAL CHIP	27K 5% 1/10W (EXCEPT 715B,720B,720BZ)
R506	1-216-069-00	METAL CHIP	6.8K 5% 1/10W	R707	1-216-105-91	METAL GLAZE	220K 5% 1/10W (715B,720B,720BZ)
R507	1-216-049-91	METAL GLAZE	1K 5% 1/10W	R708	1-216-021-00	METAL CHIP	68 5% 1/10W
R508	1-216-049-91	METAL GLAZE	1K 5% 1/10W	R710	1-216-295-91	CONDUCTOR, CHIP(2012)	
R509	1-249-437-11	CARBON	47K 5% 1/4W	R711	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R510	1-249-425-11	CARBON	4.7K 5% 1/4W F	R712	1-216-025-91	METAL GLAZE	100 5% 1/10W
R511	1-216-089-91	METAL GLAZE	47K 5% 1/10W	R717	1-216-081-00	METAL CHIP	22K 5% 1/10W
R512	1-216-089-91	METAL GLAZE	47K 5% 1/10W	R718	1-249-417-11	CARBON	1K 5% 1/4W F
R513	1-216-089-91	METAL GLAZE	47K 5% 1/10W	R720	1-216-049-91	METAL GLAZE	1K 5% 1/10W
R514	1-216-295-91	CONDUCTOR, CHIP(2012)		R721	1-216-025-91	METAL GLAZE	100 5% 1/10W
R516	1-216-041-00	METAL CHIP	470 5% 1/10W (570EG,715B,717VC,720B,720BZ,720NP,720VC)	R722	1-216-025-91	METAL GLAZE	100 5% 1/10W
R516	1-216-295-91	CONDUCTOR, CHIP(2012)	(325,475,570EE,720EE,720EG,720EX,720NC,720UX,720VP,725NC)	R723	1-216-049-91	METAL GLAZE	1K 5% 1/10W
R517	1-247-863-91	CARBON	22K 5% 1/4W	R724	1-216-049-91	METAL GLAZE	1K 5% 1/10W
R518	1-216-097-91	METAL GLAZE	100K 5% 1/10W	R725	1-216-037-00	METAL CHIP	330 5% 1/10W
R520	1-216-049-91	METAL GLAZE	1K 5% 1/10W (325,475,570,715B,720B,720BZ,720EE,720EG)	R726	1-216-073-00	METAL CHIP	10K 5% 1/10W
				R727	1-249-417-11	CARBON	1K 5% 1/4W F
				R731	1-249-413-11	CARBON	470 5% 1/4W F (715B,717VC,720,725)
				R732	1-216-049-91	METAL GLAZE	1K 5% 1/10W (715B,720B,720BZ)
				R733	1-249-413-11	CARBON	470 5% 1/4W F (715B,717VC,720,725)

Ref. No.	Part No.	Description	Remarks
R734	1-216-049-91	METAL GLAZE 1K 5% 1/10W (715B,720B,720BZ,720EE,720EG)	
R850	1-216-025-91	METAL GLAZE 100 5% 1/10W (EXCEPT 570EE,720EE)	
R851	1-216-079-00	METAL CHIP 18K 5% 1/10W (EXCEPT 570EE,720EE)	
R852	1-216-083-00	METAL CHIP 27K 5% 1/10W (EXCEPT 570EE,720EE)	
R853	1-216-049-91	METAL GLAZE 1K 5% 1/10W (EXCEPT 570EE,720EE)	
R856	1-216-097-91	METAL GLAZE 100K 5% 1/10W (EXCEPT 570EE,720EE)	
R857	1-216-069-00	METAL CHIP 6.8K 5% 1/10W (EXCEPT 570EE,720EE)	
R858	1-216-069-00	METAL CHIP 6.8K 5% 1/10W (EXCEPT 570EE,720EE)	
R859	1-216-123-11	METAL CHIP 1.2M 5% 1/10W (EXCEPT 570EE,720EE)	
R860	1-216-123-11	METAL CHIP 1.2M 5% 1/10W (EXCEPT 570EE,720EE)	
R861	1-216-117-00	METAL CHIP 680K 5% 1/10W (EXCEPT 570EE,720EE)	
R862	1-216-057-00	METAL CHIP 2.2K 5% 1/10W (EXCEPT 570EE,720EE)	
R930	1-216-073-00	METAL CHIP 10K 5% 1/10W (570EG,715B,717VC,720B,720BZ,720NP,720VC)	
R931	1-216-097-91	METAL GLAZE 100K 5% 1/10W (715B,717VC,720B,720BZ,720NP,720VC)	
R932	1-216-097-91	METAL GLAZE 100K 5% 1/10W (715B,717VC,720B,720BZ,720NP,720VC)	
R933	1-216-073-00	METAL CHIP 10K 5% 1/10W (570EG,715B,717VC,720B,720BZ,720NP,720VC)	
R934	1-216-073-00	METAL CHIP 10K 5% 1/10W (570EG,715B,717VC,720B,720BZ,720NP,720VC)	
R936	1-216-025-91	METAL GLAZE 100 5% 1/10W (570EG,715B,717VC,720B,720BZ,720NP,720VC)	
R938	1-216-053-00	METAL CHIP 1.5K 5% 1/10W (715B,717VC,720B,720BZ,720NP,720VC)	
R939	1-216-022-00	METAL CHIP 75 5% 1/10W (EXCEPT 325,475,570EE,720EE,720EG)	
R940	1-216-049-91	METAL GLAZE 1K 5% 1/10W (715B,717VC,720B,720BZ,720NP,720VC)	
R941	1-216-022-00	METAL CHIP 75 5% 1/10W (715B,717VC,720B,720BZ,720NP,720VC)	
R943	1-216-085-00	METAL CHIP 33K 5% 1/10W (715B,717VC,720B,720BZ,720NP,720VC)	
R944	1-216-089-91	METAL GLAZE 47K 5% 1/10W (715B,717VC,720B,720BZ,720NP,720VC)	
R945	1-216-041-00	METAL CHIP 470 5% 1/10W (EXCEPT 325,475,570EE,720EE,720EG)	
R946	1-216-041-00	METAL CHIP 470 5% 1/10W (EXCEPT 325,475,570EE,720EE,720EG)	
R947	1-216-041-00	METAL CHIP 470 5% 1/10W (715B,717VC,720B,720BZ,720NP,720VC)	
R948	1-216-041-00	METAL CHIP 470 5% 1/10W (715B,717VC,720B,720BZ,720NP,720VC)	
R949	1-216-073-00	METAL CHIP 10K 5% 1/10W (715B,717VC,720B,720BZ,720NP,720VC)	
R950	1-216-073-00	METAL CHIP 10K 5% 1/10W (570EG,715B,717VC,720B,720BZ,720NP,720VC)	
R951	1-216-295-91	CONDUCTOR, CHIP(2012) (EXCEPT 325,475,570EE,720EE,720EG)	

Ref. No.	Part No.	Description	Remarks
		< MODULATOR >	
RFU700	1-475-058-11	MODULATOR, RF(RFU-2110) (715B,720B,720BZ)	
RFU700	1-475-059-11	MODULATOR, RF(RFU-2101) (717VC,720EG,720EX,720NC,720NP,720UX,720VC,720VP,725NC)	
		< SWITCH >	
S100	1-570-953-11	SWITCH, PUSH (1 KEY) (CASSETTE IN/REC PROOF)	
S160	1-571-588-11	SWITCH, SLIDE(NTSC PB)	
S700	1-571-588-11	SWITCH, SLIDE(RF MODULATOR ON/OFF)	
		< TUNER >	
TU701	1-693-359-11	TUNER, MODULATOR IF (570EE,720EE)	
TU701	1-693-360-11	TUNER, MODULATOR IF (325,475,570EG)	
TU703	1-693-361-11	TUNER, IF(BTF-3WC425)(720EG)	
TU703	1-693-362-11	TUNER, IF(BTF-3WC443)(720BZ)	
TU703	1-693-364-11	TUNER, IF(BTF-3WC444)(715B,720B)	
TU703	1-693-365-11	TUNER, IF(BTF-3WC433)(720EX)	
TU703	1-693-366-11	TUNER, IF(BTF-3WU602)(720UX)	
TU703	1-693-367-11	TUNER, IF(BTF-3WC412)(720NC,720NP,725NC)	
TU703	1-693-368-11	TUNER, IF(BTF-3WC402)(717VC,720VC,720VP)	
		< VIBRATOR >	
X160	1-760-494-11	VIBRATOR, CRYSTAL 16MHz	
X201	1-579-608-11	VIBRATOR, CRYSTAL 4.43MHz	
X500	1-577-289-11	VIBRATOR, CRYSTAL 17.734475MHz	
*	A-6791-186-A	PS-385 BOARD, COMPLETE ***** (Ref.No.: 5,000 Series)	
	3-970-608-21	SUMITITE (B3), +BV	
		< CAPACITOR >	
△ C600	1-117-617-11	FILM 0.22uF 20% 275V	
△ C601	1-117-616-11	FILM 0.1uF 20% 275V	
△ C602	1-113-915-11	CERAMIC 0.001uF 20% 250V	
△ C603	1-113-915-11	CERAMIC 0.001uF 20% 250V	
△ C604	1-113-915-11	CERAMIC 0.001uF 20% 250V	
△ C605	1-113-915-11	CERAMIC 0.001uF 20% 250V	
△ C606	1-113-915-11	CERAMIC 0.001uF 20% 250V	
C607	1-117-615-11	ELECT 68uF 20% 400V	
C608	1-126-963-11	ELECT 4.7uF 20% 50V	
C609	1-130-491-00	MYLAR 0.047uF 5% 50V	
C612	1-130-491-00	MYLAR 0.047uF 5% 50V	
C613	1-115-741-11	ELECT 0.0022F 20% 10V	
C615	1-111-042-11	ELECT 0.0012F 20% 16V	
C616	1-136-165-00	MYLAR 0.1uF 10% 50V	
C617	1-126-935-11	ELECT 470uF 20% 16V	
C618	1-126-926-11	ELECT 1000uF 20% 10V	
C619	1-126-934-11	ELECT 220uF 20% 16V	
C621	1-126-967-11	ELECT 47uF 20% 16V	
C624	1-126-934-11	ELECT 220uF 20% 16V	
C625	1-128-551-11	ELECT 22uF 20% 25V	

Note : The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
C626	1-126-933-11	ELECT	100uF 20% 16V			< IC LINK >	
C627	1-126-967-11	ELECT	47uF 20% 50V				
C628	1-128-551-11	ELECT	22uF 20% 25V	△PS600	1-532-841-21	LINK, IC 1.6A	
C629	1-126-924-11	ELECT	330uF 20% 10V	△PS601	1-532-841-21	LINK, IC 1.6A	
C630	1-126-924-11	ELECT	330uF 20% 10V	△PS602	1-533-593-11	LINK, IC 2A	
				△PS603	1-532-841-21	LINK, IC 1.6A	
C633	1-111-084-11	ELECT	220uF 20% 35V			< TRANSISTOR >	
C634	1-126-949-11	ELECT	220uF 20% 35V				
C636	1-126-968-11	ELECT	100uF 20% 50V				
C637	1-162-134-11	CERAMIC	470PF 10% 2KV				
		< CONNECTOR >					
CN600	1-580-230-11	PIN, CONNECTOR (PC BOARD) 2P		Q600	8-729-024-00	TRANSISTOR 2SC3377-T93Q	
CN601	1-569-341-11	CONNECTOR, BOARD TO BOARD 19P		Q601	8-729-032-85	TRANSISTOR 2SC4231LM	
		< DIODE >		Q602	8-729-140-93	TRANSISTOR 2SB733-34	
D600	8-719-051-93	DIODE DF06M-6031		Q603	8-729-421-22	TRANSISTOR UN2211	
D602	8-719-975-89	DIODE ERA15-02TP3		Q604	8-729-018-99	TRANSISTOR 2SD2394-F	
D603	8-719-981-97	DIODE MTZJ-3.0A					
D604	8-719-991-33	DIODE 1SS133T-77		Q605	8-729-119-77	TRANSISTOR 2SA1175-FEK	
D605	8-719-043-76	DIODE AK04V0		Q607	8-729-140-96	TRANSISTOR KSC1008	
				Q608	8-729-901-06	TRANSISTOR DTA144EK	
D606	1-809-649-11	DIODE RK44LF-L1		Q610	8-729-140-96	TRANSISTOR KSC1008	
D607	8-719-313-17	DIODE AU02A-V0		Q611	8-729-901-06	TRANSISTOR DTA144EK	
D608	8-719-510-73	DIODE S3L20UF4					
D609	8-719-313-17	DIODE AU02A-V0		Q612	8-729-421-19	TRANSISTOR UN2213	
D610	8-719-059-64	DIODE RD16F-T8B2		Q613	8-729-119-79	TRANSISTOR 2SC2785-FEK	
				Q614	8-729-119-77	TRANSISTOR 2SA1175-FEK	
D612	8-719-911-19	DIODE 1SS119				< RESISTOR >	
D613	8-719-109-85	DIODE RD5.1ES-B2					
D614	8-719-911-19	DIODE 1SS119		△R600	1-214-947-00	METAL 2.7M 1% 1/2W	
		< TERMINAL BOARD >		R601	1-247-887-00	CARBON 220K 5% 1/4W	
ET600	1-537-770-21	TERMINAL BOARD, GROUND		R602	1-247-887-00	CARBON 220K 5% 1/4W	
		< FUSE >		R603	1-249-429-11	CARBON 10K 5% 1/4W	
△F600	1-533-827-11	FUSE (HOLDER TO) T2A 250V		R604	1-215-885-00	METAL OXIDE 68 5% 2W F	
		< IC >					
IC601	8-759-438-18	IC PQ12RD08		R606	1-215-416-00	METAL 620 1% 1/6W	
IC602	8-759-035-35	IC TL431CLPRA		R607	1-247-807-31	CARBON 100 5% 1/4W	
		< JUMPER RESISTOR >		R608	1-249-404-00	CARBON 82 5% 1/4W F	
JS612	1-216-295-91	CONDUCTOR, CHIP (2012)		R609	1-215-428-00	METAL 2K 1% 1/6W	
		< COIL >		R610	1-249-406-11	CARBON 120 5% 1/4W F	
L600	1-403-588-11	CIL, CHOKE 22uH					
L601	1-403-588-11	CIL, CHOKE 22uH		R611	1-215-425-00	METAL 1.5K 1% 1/6W	
L602	1-408-397-00	INDUCTOR 1uH		R612	1-249-421-11	CARBON 2.2K 5% 1/4W F	
L603	1-408-397-00	INDUCTOR 1uH		R613	1-249-421-11	CARBON 2.2K 5% 1/4W F	
L604	1-414-792-11	INDUCTOR 0uH		R614	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
		< LINE FILTER >		R615	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
LF600	1-424-485-11	FILTER, LINE					
LF601	1-409-977-11	FILTER, LINE		R616	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
LF602	1-409-977-11	FILTER, LINE		R617	1-249-417-11	CARBON 1K 5% 1/4W F	
		< PHOTOCOUPLER >		R618	1-247-815-91	CARBON 220 5% 1/4W	
△PH600	8-749-013-04	PHOTOCOUPLER MOC8104TV		R620	1-249-417-11	CARBON 1K 5% 1/4W F	
				R621	1-216-363-00	METAL OXIDE 0.33 5% 2W F	
				R622	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
				R623	1-216-073-00	METAL CHIP 10K 5% 1/10W	
				R624	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
				R625	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
				R626	1-247-815-91	CARBON 220 5% 1/4W	
				R627	1-249-421-11	CARBON 2.2K 5% 1/4W F	
						< TRANSFORMER >	
				T600	1-431-167-11	TRANSFORMER, RCC CONVERTER	

Note : The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

RP-217

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
*	A-6791-187-A	RP-217 BOARD, COMPLETE (715B,717VC,720,725) *****		C280	1-124-584-00	ELECT 100uF 20% 10V	
*	A-6791-201-A	RP-217 BOARD, COMPLETE(570) *****		C282	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
*	A-6791-212-A	RP-217 BOARD, COMPLETE(325) *****		C283	1-163-038-91	CERAMIC CHIP 0.1uF 25V	
*	A-6791-215-A	RP-217 BOARD, COMPLETE(475) ***** (Ref.No.: 1,000 Series)		C284	1-163-038-91	CERAMIC CHIP 0.1uF 25V	
		< CAPACITOR >		C286	1-124-584-00	ELECT 100uF 20% 10V	
C140	1-126-960-11	ELECT 1uF 20% 50V		C287	1-163-239-11	CERAMIC CHIP 33PF 5% 50V	
C141	1-163-263-11	CERAMIC CHIP 330PF 5% 50V (570,715B,717VC,720,725)		C288	1-163-239-11	CERAMIC CHIP 33PF 5% 50V	
C141	1-163-275-11	CERAMIC CHIP 0.001uF 5% 50V (325,475)		C289	1-163-038-91	CERAMIC CHIP 0.1uF 25V	
C142	1-126-960-11	ELECT 1uF 20% 50V		C290	1-164-346-11	CERAMIC CHIP 1uF 16V	
C143	1-126-967-11	ELECT 47uF 20% 16V		C321	1-126-967-11	ELECT 47uF 20% 16V	
C144	1-163-031-11	CERAMIC CHIP 0.01uF 50V		C322	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C145	1-163-018-00	CERAMIC CHIP 0.0056uF 5% 50V		C323	1-164-232-11	CERAMIC CHIP 0.01uF 50V	
C146	1-126-933-11	ELECT 100uF 20% 16V		C324	1-104-697-11	FILM 0.047uF 5% 100V (EXCEPT 570)	
C147	1-126-960-11	ELECT 1uF 20% 50V		C324	1-137-462-11	FILM 0.018uF 5% 100V (570)	
C260	1-163-231-11	CERAMIC CHIP 15PF 5% 50V (EXCEPT 325)		C331	1-126-933-11	ELECT 100uF 20% 16V (570)	
C260	1-163-235-11	CERAMIC CHIP 22PF 5% 50V (325)		C332	1-164-232-11	CERAMIC CHIP 0.01uF 50V (570)	
C261	1-163-231-11	CERAMIC CHIP 15PF 5% 50V (EXCEPT 325)		C334	1-163-011-11	CERAMIC CHIP 0.0015uF 10% 50V (570)	
C264	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V		C335	1-104-697-11	FILM 0.047uF 100V (570)	
C265	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V (EXCEPT 325)		C341	1-163-031-11	CERAMIC CHIP 0.01uF 50V (715B,717VC,720,725)	
C266	1-163-031-11	CERAMIC CHIP 0.01uF 50V		C342	1-163-031-11	CERAMIC CHIP 0.01uF 50V (715B,717VC,720,725)	
C267	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V		C343	1-124-257-00	ELECT 2.2uF 20% 50V (715B,717VC,720,725)	
C268	1-163-241-11	CERAMIC CHIP 39PF 5% 50V (325)		C344	1-163-031-11	CERAMIC CHIP 0.01uF 50V (715B,717VC,720,725)	
C268	1-163-243-11	CERAMIC CHIP 47PF 5% 50V (EXCEPT 325)		C345	1-126-160-11	ELECT 1uF 20% 50V (715B,717VC,720,725)	
C269	1-163-241-11	CERAMIC CHIP 39PF 5% 50V (325)		C346	1-124-584-00	ELECT 100uF 20% 10V (715B,717VC,720,725)	
C269	1-163-243-11	CERAMIC CHIP 47PF 5% 50V (EXCEPT 325)		C347	1-163-031-11	CERAMIC CHIP 0.01uF 50V (715B,717VC,720,725)	
C270	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V		C350	1-163-038-91	CERAMIC CHIP 0.1uF 25V (715B,717VC,720,725)	
C271	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V		C351	1-163-139-00	CERAMIC CHIP 820PF 5% 50V (715B,717VC,720,725)	
C272	1-163-031-11	CERAMIC CHIP 0.01uF 50V (325)		C352	1-163-031-11	CERAMIC CHIP 0.01uF 50V (715B,717VC,720,725)	
C272	1-163-243-11	CERAMIC CHIP 47PF 5% 50V (EXCEPT 325)		C353	1-163-038-91	CERAMIC CHIP 0.1uF 25V (715B,717VC,720,725)	
C273	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V(325)		C356	1-163-139-00	CERAMIC CHIP 820PF 5% 50V (715B,717VC,720,725)	
C273	1-163-243-11	CERAMIC CHIP 47PF 5% 50V (EXCEPT 325)		C357	1-163-031-11	CERAMIC CHIP 0.01uF 50V (715B,717VC,720,725)	
C274	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V (EXCEPT 325)		C358	1-163-038-91	CERAMIC CHIP 0.1uF 25V (715B,717VC,720,725)	
C275	1-164-346-11	CERAMIC CHIP 1uF 16V				< CONNECTOR >	
C276	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V		CN260	1-563-585-11	CONNECTOR, FLEXIBLE 8P (325,475,570)	
C277	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V		CN260	1-766-986-11	CONNECTOR, FFC/FPC 13P (715B,717VC,720,725)	
C278	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V (EXCEPT 325)		* CN261	1-564-030-00	PIN, CONNECTOR 5P	
C279	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V (EXCEPT 325)		CN271	1-573-834-11	CONNECTOR, BOARD TO BOARD 20P	
				CN272	1-766-720-11	CONNECTOR, BOARD TO BOARD 17P	
				CN301	1-506-481-11	PIN, CONNECTOR 2P	
				CN302	1-506-485-11	PIN, CONNECTOR 6P	
				* CN341	1-564-027-00	PIN, CONNECTOR 2P (715B,717VC,720,725)	

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
		< IC >					
IC140	8-759-438-83	IC BA6305F		R264	1-216-295-91	CONDUCTOR, CHIP(2012)	
IC141	8-759-510-73	IC BA10393F-E2		R265	1-216-295-91	CONDUCTOR, CHIP(2012)	(EXCEPT 325)
IC260	8-759-352-17	IC HA118195NT (EXCEPT 325)		R266	1-216-053-00	METAL CHIP 1.5K	5% 1/10W (325)
IC260	8-759-357-84	IC HA118295NT (325)		R266	1-216-055-00	METAL CHIP 1.8K	5% 1/10W (EXCEPT 325)
IC301	8-759-089-84	IC BA7755AF-T1		R267	1-216-071-00	METAL CHIP 8.2K	5% 1/10W (EXCEPT 325)
IC340	8-759-055-49	IC AN3327K (715B,717VC,720,725)		R267	1-216-073-00	METAL CHIP 10K	5% 1/10W (325)
		< JUMPER RESISTOR >		R268	1-216-081-00	METAL CHIP 22K	5% 1/10W
JR501	1-216-296-91	CONDUCTOR, CHIP(3216)		R269	1-216-059-00	METAL CHIP 2.7K	5% 1/10W (EXCEPT 325)
JR502	1-216-295-91	CONDUCTOR, CHIP(2012)		R269	1-216-061-00	METAL CHIP 3.3K	5% 1/10W (325)
		< JUMPER RESISTOR >		R270	1-216-081-00	METAL CHIP 22K	5% 1/10W
JS331	1-216-295-91	CONDUCTOR, CHIP(2012) (325,475,715B,717VC,720,725)		R271	1-216-049-91	METAL GLAZE 1K	5% 1/10W
		< COIL >		R272	1-216-081-00	METAL CHIP 22K	5% 1/10W
L140	1-408-982-11	INDUCTOR 100uH		R273	1-216-081-00	METAL CHIP 22K	5% 1/10W
L262	1-408-970-21	INDUCTOR 10uH		R274	1-216-075-00	METAL CHIP 12K	5% 1/10W
L263	1-408-982-11	INDUCTOR 100uH		R275	1-216-075-00	METAL CHIP 12K	5% 1/10W
L321	1-408-982-11	INDUCTOR 100uH		R276	1-216-049-91	METAL GLAZE 1K	5% 1/10W
L331	1-410-687-11	INDUCTOR 1.2mH (570)		R278	1-216-025-91	METAL GLAZE 100	5% 1/10W (325)
L341	1-408-982-11	INDUCTOR 100uH (715B,717VC,720,725)		R317	1-216-079-00	METAL CHIP 18K	5% 1/10W
		< IC LINK >		R321	1-249-401-11	CARBON 47	5% 1/4W F
△PS331	1-533-586-31	LINK, IC 0.315A (570)		R322	1-216-059-00	METAL CHIP 2.7K	5% 1/10W (EXCEPT 325,570)
		< TRANSISTOR >		R322	1-216-063-91	METAL GLAZE 3.9K	5% 1/10W (325)
Q141	8-729-901-06	TRANSISTOR DTA144EK		R322	1-216-067-00	METAL CHIP 5.6K	5% 1/10W (570)
Q260	8-729-230-49	TRANSISTOR 2SC2712-YG		R323	1-217-671-11	METAL CHIP 1	5% 1/10W
Q321	8-729-802-91	TRANSISTOR 2SD879		R324	1-249-408-11	CARBON 180	5% 1/4W F
Q331	8-729-012-31	TRANSISTOR 2SC4040-TL2-Q (570)		R331	1-216-295-91	CONDUCTOR, CHIP(2012)	(570)
Q332	8-729-900-51	TRANSISTOR DTA114TK (570)		R332	1-216-083-00	METAL CHIP 27K	5% 1/10W (570)
		< RESISTOR >		R333	1-249-394-11	CARBON 12	5% 1/4W F (570)
R140	1-216-117-00	METAL CHIP 680K	5% 1/10W	R335	1-126-735-11	ELECT 10MF	20% 100V (570)
R141	1-216-037-00	METAL CHIP 330	5% 1/10W	R341	1-216-067-00	METAL CHIP 5.6K	5% 1/10W (715B,717VC,720,725)
R142	1-216-049-91	METAL GLAZE 1K	5% 1/10W	R342	1-216-051-00	METAL CHIP 1.2K	5% 1/10W (715B,717VC,720,725)
R143	1-216-065-00	METAL CHIP 4.7K	5% 1/10W	R343	1-216-073-00	METAL CHIP 10K	5% 1/10W (715B,717VC,720,725)
R144	1-216-043-91	METAL GLAZE 560	5% 1/10W	R344	1-216-079-00	METAL CHIP 18K	5% 1/10W (715B,717VC,720,725)
R145	1-216-105-91	METAL GLAZE 220K	5% 1/10W	R345	1-216-097-91	METAL GLAZE 100K	5% 1/10W (715B,717VC,720,725)
R147	1-208-830-11	METAL GLAZE 100K	0.50% 1/10W	R346	1-216-065-00	METAL CHIP 4.7K	5% 1/10W (715B,717VC,720,725)
R148	1-208-830-11	METAL GLAZE 100K	0.50% 1/10W	R347	1-216-065-00	METAL CHIP 4.7K	5% 1/10W (715B,717VC,720,725)
R149	1-208-830-11	METAL GLAZE 100K	0.50% 1/10W	R348	1-216-097-91	METAL GLAZE 100K	5% 1/10W (715B,717VC,720,725)
R150	1-216-065-00	METAL CHIP 4.7K	5% 1/10W	R350	1-216-033-00	METAL CHIP 220	5% 1/10W (715B,717VC,720,725)
R151	1-208-830-11	METAL GLAZE 100K	0.50% 1/10W	R351	1-216-035-00	METAL CHIP 270	5% 1/10W (715B,717VC,720,725)
R152	1-216-111-91	METAL GLAZE 390K	5% 1/10W	R356	1-216-035-00	METAL CHIP 270	5% 1/10W (715B,717VC,720,725)
R153	1-216-057-00	METAL CHIP 2.2K	5% 1/10W				
R155	1-216-065-00	METAL CHIP 4.7K	5% 1/10W				
R157	1-216-081-00	METAL CHIP 22K	5% 1/10W				
R260	1-216-041-00	METAL CHIP 470	5% 1/10W (EXCEPT 325)				
R260	1-216-045-00	METAL CHIP 680	5% 1/10W (325)				
R261	1-216-041-00	METAL CHIP 470	5% 1/10W (EXCEPT 325)				
R262	1-216-295-91	CONDUCTOR, CHIP(2012)					
R263	1-216-295-91	CONDUCTOR, CHIP(2012)					

Note : The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remarks
		< TRANSFORMER >	
T321	1-431-097-11	TRANSFORMER, BIAS OSCILLATION	(EXCEPT 570)
T321	1-431-100-11	TRANSFORMER, BIAS OSCILLATION	(570)
T331	1-423-415-11	TRANSFORMER, BIAS OSCILLATION	(570)

MISCELLANEOUS

11	1-762-844-21	SWITCH, ROTARY	(570)
△ 15	1-782-012-11	CORD, POWER	
17	1-777-960-11	CABLE, FLAT (FFM-13)	29P
158	1-500-144-11	HEAD, FE	
164	A-6736-105-A	ACE BLOCK ASSY	
165	1-506-485-11	PIN, CONNECTOR	6P
203	1-759-183-11	DRUM ASSY, DZH-78A-R(M901)	(325)
203	1-759-371-11	DRUM ASSY, DZH-65A-R(M901)	(475,570)
203	1-759-373-11	DRUM ASSY, DZH-86A-R(M901)	(715B,717VC,720,725)
260	1-762-076-11	SWITCH, ROTARY	
M902	1-698-409-14	MOTOR, DC(CAPSTAN)	
M903	X-3943-883-1	MOTOR ASSY, CAM	

ACCESSORIES & PACKING MATERIALS

1-696-593-11	CORD, CONNECTION (PAL)(FOR RF)	1.5m
1-770-019-11	ADAPTOR, CONVERSION PLUG	3P
		(720EX,720UX)
1-770-321-11	ADAPTOR, CONVERSION	6P (720EE)
1-770-321-21	ADAPTOR, CONVERSION	4P (570EE)
3-858-881-11	MANUAL, INSTRUCTION (ENGLISH)	
		(720EX,720UX)
3-858-881-21	MANUAL, INSTRUCTION (FRENCH)	
		(720NC,720VP,725NC)
3-858-881-31	MANUAL, INSTRUCTION (GERMAN)	
		(717VC,720NC,720VC,720VP,725NC)
3-858-881-41	MANUAL, INSTRUCTION (FRENCH)	
		(720B,720BZ)
3-858-881-51	MANUAL, INSTRUCTION (DUTCH)	
		(720NC,720VP,725NC)
3-858-881-61	MANUAL, INSTRUCTION (ITALIAN)	(720VP)
3-858-881-71	MANUAL, INSTRUCTION (SPANISH)	(720NP)
3-858-881-81	MANUAL, INSTRUCTION (PORTUGUESE)	
		(720NP)
3-858-882-11	MANUAL, INSTRUCTION (SWEDISH)	
		(720NC,725NC)
3-858-882-21	MANUAL, INSTRUCTION (FINISH)	
		(720NC,725NC)
3-858-882-31	MANUAL, INSTRUCTION (DANISH)	
		(720NC,725NC)
3-858-883-11	MANUAL, INSTRUCTION (ENGLISH)	(720EG)
3-858-883-21	MANUAL, INSTRUCTION (CZECH)	(720EG)
3-858-883-31	MANUAL, INSTRUCTION (POLISH)	(720EG)
3-858-883-41	MANUAL, INSTRUCTION (HUNGARIAN)	(720EG)
3-858-883-51	MANUAL, INSTRUCTION (ENGLISH)	(720EE)
3-858-883-61	MANUAL, INSTRUCTION (RUSSIAN)	(720EE)
3-858-884-11	MANUAL, INSTRUCTION (ENGLISH)	(570EG)
3-858-884-21	MANUAL, INSTRUCTION (CZECH)	(570EG)
3-858-884-31	MANUAL, INSTRUCTION (POLISH)	(570EG)
3-858-884-41	MANUAL, INSTRUCTION (HUNGARIAN)	(570EG)

Ref. No.	Part No.	Description	Remarks
	3-858-884-51	MANUAL, INSTRUCTION (ENGLISH)	(570EE)
	3-858-884-61	MANUAL, INSTRUCTION (RUSSIAN)	(570EE)
	3-858-885-11	MANUAL, INSTRUCTION (CZECH)	(475)
	3-858-885-21	MANUAL, INSTRUCTION (ENGLISH)	(325)
	3-858-885-31	MANUAL, INSTRUCTION (CZECH)	(325)

	3-858-885-41	MANUAL, INSTRUCTION (POLISH)	(325)
	3-858-885-51	MANUAL, INSTRUCTION (HUNGARIAN)	(325)
	3-859-420-21	MANUAL, INSTRUCTION (FRENCH)	(715B)
*	3-972-892-01	INDIVIDUAL CARTON	

			(720NC,720NP,720VC,720VP)
*	3-972-892-11	INDIVIDUAL CARTON	(720B,720BZ)

*	3-972-892-21	INDIVIDUAL CARTON	(720EX,720UX)
*	3-972-892-31	INDIVIDUAL CARTON	(717VC)
*	3-972-892-41	INDIVIDUAL CARTON	(725NC)
*	3-972-892-51	INDIVIDUAL CARTON	(715B)
*	3-972-893-01	CUSHION	

*	3-974-278-01	INDIVIDUAL CARTON	(720EG)
*	3-974-278-11	INDIVIDUAL CARTON	(720EE)
*	3-974-278-21	INDIVIDUAL CARTON	(570EG)
*	3-974-278-31	INDIVIDUAL CARTON	(570EE)
*	3-974-278-41	INDIVIDUAL CARTON	(475)

*	3-974-278-51	INDIVIDUAL CARTON	(325)
*	3-974-583-01	SPACER	

HARDWARE LIST

#1	7-682-547-04	SCREW +P	3X6
#2	7-685-646-79	SCREW	(3X8)
#5	7-624-190-61	STOP RING	2.4,TYPE-CS
#6	7-628-254-10	SCREW +PS	2.6X6
#7	7-624-106-04	STOP RING	3.0,TYPE-E
#8	7-682-645-01	SCREW +PS	3X4

Note : The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

SECTION 6
INTERFACE, IC PIN FUNCTION DESCRIPTION

6-1. SYSTEM CONTROL — SERVO PERIPHERAL CIRCUIT INTERFACE (MA-286 BOARD IC160)

Signal	Pin No.	I/O	STOP	FF	REW	TAPE THREADING	TAPE UNTHREADING	PB	PB PAUSE	SLOW	CUE	x 2	REVIEW	REC	REC PAUSE	PB INDEX WRITING
REC CTL	MA-286 IC160 ⑦	O	*1	*1	*1	*1	*1	*1	*1	*1	*1	*1	*1	*1	*1	
CAP STOP	MA-286 IC160 ③	O (O.D)	L	Hi-Z (O.D)	Hi-Z (O.D)	Hi-Z (O.D)	Hi-Z (O.D)	Hi-Z (O.D)	L	*3	Hi-Z (O.D)	Hi-Z (O.D)	Hi-Z (O.D)	Hi-Z (O.D)	Hi-Z (O.D)	
STEP PLS	MA-286 IC160 ⑨	O	L	L	L	L	L	L	L	*2	L	L	L	L	L	
CTL REC	MA-286 IC160 ⑦	O	L	L	L	L	L	L	L	L	L	L	L	H	L	H
CTL INDEX	MA-286 IC160 ③	O	L	L	L	L	L	L	L	L	L	L	L	L	L	H
PB CTL	MA-286 IC160 ⑦	I	H	*8	*8			*1	H/L	*2	*5	*6	*6	*1	H	
DRM PG	MA-286 IC160 ⑥	I	*1	*1	*1	*5	*5	*1	*1	*1	*1	*1	*1	*1	*1	
DRM FG	MA-286 IC160 ⑥	I	*1	*7	*7	*5	*5	*7	*7	*7	*7	*7	*7	*7	*7	
CAP FG	MA-286 IC160 ⑦	I	H/L	*6	*6	*5	*5	*8	H/L	*2	*6	*6	*6	*6	H/L	
CAP DA	MA-286 IC160 ⑦	O	*8	*8	*8	*8	*8	*9	*8	*8	*9	*9	*9	*9	*8	
DRM DA	MA-286 IC160 ⑦	O	*10	*10	*10	*10	*10	*10	*10	*10	*10	*10	*10	*10	*10	
CTL STEP	MA-286 IC160 ⑦	O	L	L	L	L	L	L	L	*11	L	L	L	L	L	
CTL GAIN	MA-286 IC160 ⑨	O	H	H	H	H	H	H	*12	*12	H	H	H	H	L	L
CTL RESET	MA-286 IC160 ⑥	I/O	Hi-Z	Hi-Z	Hi-Z	Hi-Z	Hi-Z	Hi-Z	Hi-Z	Hi-Z	Hi-Z	Hi-Z	*13	Hi-Z	Hi-Z	Hi-Z
REC COUNT	MA-286 IC160 ⑦	I	Hi-Z	Hi-Z	Hi-Z	Hi-Z	Hi-Z	Hi-Z	Hi-Z	Hi-Z	Hi-Z	Hi-Z	Hi-Z	Hi-Z	Hi-Z	Hi-Z

- *1. 25Hz pulse.
- *2. Pulse at tape running.
- *3. Reverse logic pulse of STEP PLS.
- *4. “L” when drum rotation stop.
- *5. Unstable period pulse.
- *6. Pulse of period in proportion to tape speed.
- *7. 300Hz pulse.
- *8. Approx. 2 msec period “H” or “L” pulse.
- *9. Approx. 1.5 msec period “H” or “L” pulse.
- *10. Approx. 3 msec period “H” or “L” pulse.
- *11. “H” when FWD directions STEP drive.

6-2. SYSTEM CONTROL — MECHANISM INTERFACE (MA-286 BOARD IC160)

Signal	Pin No.	I/O	EJECTED	CASSETTE LOADING	CASSETTE UNLOADING	TAPE THREADING	TAPE UNTHREADING	STOP	FF	REW	PB	PB PAUSE	SLOW	x 2	CUE	REVIEW	REC	REC PAUSE
CAM2 CW	MA-286 IC160 ⑨	I/O	Hi-Z	H	L	H	L	Hi-Z	Hi-Z	Hi-Z	Hi-Z	Hi-Z	Hi-Z	Hi-Z	Hi-Z	Hi-Z	Hi-Z	Hi-Z
CAM1 V	MA-286 IC160 ⑩	I/O	Hi-Z	H	H	Hi-Z	Hi-Z	Hi-Z	Hi-Z	Hi-Z	Hi-Z	Hi-Z	Hi-Z	Hi-Z	Hi-Z	Hi-Z	Hi-Z	Hi-Z
MODE 1	MA-286 IC160 ②②	I	H	L	L	*1	*1	H	H	H	H	H	H	H	H	L	H	H
MODE 2	MA-286 IC160 ②①	I	L	L	L	*1	*1	L	L	L	H	H	H	H	H	H	H	H
MODE 3	MA-286 IC160 ②③	I	L	L	L	*1	*1	H	H	H	L	H	H	L	L	H	L	H
MODE 4	MA-286 IC160 ①⑨	I	L	H	H	*1	*1	H	L	L	L	L	L	L	L	L	L	L
REC PRF	MA-286 IC160 ①⑤	I	L	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2
T REEL FG	MA-286 IC160 ⑥④	I	H/L	H/L	H/L	H/L	H/L	H/L	*3	*3	*3	H/L	*3	*3	*3	*3	*3	H/L
S REEL FG	MA-286 IC160 ⑥③	I	H/L	H/L	H/L	*3	*3	H/L	*3	*3	*3	H/L	*3	*3	*3	*3	*3	H/L
T/E LED	MA-286 IC160 ③②	O (O.D)	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4	*4
CAP PWM	MA-286 IC160 ⑥⑧	O (O.D)	*8	*8	*8	*8	*8	*8	*9	*9	*8	*10	*11	*8	*9	*9	*8	*10
CAP STOP	MA-286 IC160 ③⑤	O (O.D)	L	L	L	H	H	L	H	H	H	L	*5	H	H	H	H	L
CAP RVS	MA-286 IC160 ⑦②	O	H			L	H	H/L	L	H	L	L	L/*5	L	L	H	L	L
CAP DA	MA-286 IC160 ⑦③	O																
T SENS	MA-286 IC160 ⑥①	I	*4	*4	*4	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7
S SENS	MA-286 IC160 ⑥②	I	*4	*4	*4	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7

- *1. Uncertainly.
- *2. “L” when erasing protection tab is bent. “H” when not bent.
- *3. Pause of period in proportion to real rotating speed.
- *4. Approx. 2 msec period “H” pulse.
- *5. Pulse at tape running.
- *6. “L” when tape running and CAP RVS is “H”.
- *7. Normally “L”. 2 msec period “H” pulse when tape top or tape end is detected.
- *8. Captra Normal Duty pulse becomes 1.6V by LPF.
- *9. Captra FR Duty pulse becomes 3.189V by LPF.
- *10. Captra Denji Duty pulse becomes 0.31V by LPF.
- *11. Captra Mid Duty pulse becomes 1.426V by LPF.
Captra Low Duty pulse becomes 0.684V by LPF.

6-3. SYSTEM CONTROL — SYSTEM CONTROL PERIPHERAL CIRCUIT INTERFACE (MA-286 BOARD IC160)

Signal	Pin No.	I/O	I/O Level
ASURA RESET	MA-286 IC160 ④⑨	I	Normally “H”, “L” when service interruption is detected or restored.
ASURA CS	MA-286 IC160 ④④	I	Chip select signal from timer microprocessor. V period “L” pulse.
S IN 0	MA-286 IC160 ④⑤	I	Serial communication data from timer microprocessor. V period “L” pulse.
S OUT 0	MA-286 IC160 ④⑥	O	Serial communication data to timer microprocessor. V period “L” pulse.
S CLK	MA-286 IC160 ④⑦	I	Serial communication clock from timer microprocessor. V period “L” pulse.

6-4. SYSTEM CONTROL — Hi-Fi AUDIO BLOCK INTERFACE (MA-286 BOARD IC160)

Signal	Pin No.	I/O	TOP/FF/REW	TAPE LOADING	TAPE UNLOADING	PB	PB PAUSE	SLOW	x 2	CUE	REVIEW	REC	REC PAUSE
AF ENV	MA-286 IC160 ③⑨	I	AF RF envelope signal input terminal for automatic tracking.										
A MUTEN	MA-286 IC160 ③①	O (O.D)	L	L	L	*1	H	H	H	H	H	L	L
AF REC $\bar{P}$	MA-286 IC160 ②②	O	L	L	L	L	L	L	L	L	L	H	L
AF SWP	MA-286 IC160 ③⑩	O	*1	*1	*1	*1	*1	*1	*1	*1	*1	*1	*1
FULL ERS	MA-286 IC160 ③③	O (O.D)	H	H	H	H	H	H	H	H	H	L	H

- *1. 25 Hz 50 % duty pulse approx. 5 msec delayed from RF SW P.

6-5. SERVO/SYSTEM CONTROL MICROPROCESSOR PIN FUNCTIONS (MA-286 BOARD IC160)

Pin No.	Pin Name	I/O	Function
1	RF SWP	O	RF switching pulse output.
2	AF REC $\bar{P}$	O	“H” when HiFi audio REC.
3		—	Not used.
4	QVD	O	Quasi VD pulse output.
5	AUTO PRESET	O	“H” during auto preset.
6	FE ON	O	Not used.
7	REC CTL	O	REC CTL signal output.
8	CTL RESET	O	Capstan current control. “H” during slow mode.
9	CAM 2	O	Cam motor control.
10	CAM 1	O	Cam motor 9V, 12V switch.
11	TA MUTE	O	Tuner audio mute. H: Mute
12	SECAM DET	I	“H” when the SECAM signal is detected.
13	NT JUDGE	I	4.43/3.58 judge input.
14	MESECAM	I	“H” when the MESECAM signal is detected.
15	CIN (REC PRF)	I	Erasing protection tab, cassette in detection signal input.
16	AV CONT	O	On/Off control.
17	N. C.	—	Not used.
18	SW1	O	
19	MODE 4	I	Cam encoder signal input.
20	MODE 3	I	Cam encoder signal input.
21	MODE 2	I	Cam encoder signal input.
22	MODE 1	I	Cam encoder signal input.
23	N. C.	—	Not used.
24	PAL PLUS CONT	O	
25	N. C.	—	Not used.
26	N. C.	—	Not used.
27	N. C.	—	Not used.
28	SDA 0	I/O	IIC data.
29	N. C.	—	Not used.
30	SCL 0	I/O	IIC clock.
31	A MUTE	O	“H” when audio mute.
32	T/E LED	O	Tape top/end sensors driver .
33	N. C.	—	Not used.
34	N. C.	—	Not used.
35	$\overline{\text{CAP STOP}}$	O	Capstan stop signal output.
36	$\overline{\text{FULL ERS}}$	O	Full erase control.
37	N. C.	O	Not used.
38	N. C.	O	Not used.
39	MP	I	Fixed to “L”.
40	$\overline{\text{ASURA RESET}}$	I	System reset signal.
41	VSS	—	Ground.
42	XTAL	—	System clock 16MHz.
43	EXTAL	—	System clock 16MHz.
44	$\overline{\text{ASURA CS}}$	I	Servo/system control microcomputer chip select signal.
45	S IN 0	I	Serial communication signal.
46	S OUT 0	O	Serial communication signal.
47	SCLK	O	Serial communication signal.
48	N. C.	—	Not used.
49	N. C.	—	Not used.
50	N. C.	—	Not used.

Pin No.	Pin Name	I/O	Function
51	SW2	O	Tuner select switch.
52	AVSS	—	Unswitched ground.
53	AVREF	—	AD port reference input UNSW 5V.
54	AVDD	—	UNSW 5V.
55	NTPB SW	I	NTSC playback switch.
56	AV ADJ	I	Adjustment mode.
57	N. C.	—	Not used.
58	N. C.	—	Not used.
59	AF ENV	I	HiFi audio playback signal envelope.
60	RF ENV	I	Video playback signal envelope.
61	T SENS	I	Take-up end sensor.
62	S SENS	I	Supply end sensor.
63	S REEL FG	I	Supply reel FG input.
64	T REEL FG	I	Take-up reel FG input.
65		—	Not used.
66	VSYNC	I	Composite sync. signal input.
67	PB CTL	I	Playback CTL input.
68	DRM PG	I	Drum PG input.
69	DRM FG	I	Drum FG input.
70	CAP FG	I	Capstan FG input.
71		—	Not used.
72	CAP RVS	O	Capstan reverse control “H” when reverse.
73	CAP DA	O	Capstan error D/A output.
74	DRM DA	O	Drum PG input.
75	CTL REC	O	“H” : CTL is recorded.
76	CTL STEP	O	CTL amp, STEP operation control.
77	REC COUNT	I	Counter signal input when recording.
78	N. C.	—	Not used.
79	N. C.	—	Not used.
80	DATA (SSB)	I/O	Serial communication data.
81	CLOCK (SSB)	I/O	Serial communication clock.
82	N.C.	—	Not used.
83	N. C.	—	Not used.
84	CAP TRQ PWM	O	PWM output for capstan torque control.
85	N. C.	I	Not used.
86	N. C.	—	Not used.
87	N. C.	—	Not used.
88	VSS	—	Ground.
89	VDD	—	5V.
90	5V	—	5V.
91	N. C.	—	Not used.
92	CTL GAIN	O	CTL amp gain control.
93	$\overline{\text{SP}}$	O	Normal audio tape speed select.
94	N. C.	—	Not used.
95	N. C.	—	Not used.
96	REC	O	“H” output when recording.
97	N. C.	—	Not used.
98	N. C.	—	Not used.
99	STEP PLS	O	Step pulse “H” when capstan stops.
100	AF SWP	O	AF switching pulse output.

6-6. TUNER/TIMER MODE CONTROL PIN FUNCTION (FR-119 BOARD IC470)

Pin No.	Pin Name	I/O	Function
1	PDC DAV	I	Line 21H output pulse.
2	DMS1	I	DMS A/D input.
3	DMS2	I	DMS A/D input.
4	SIRCS IN	I	SIRCS signal input.
5	N.C.	—	Not used.
6	N.C.	—	Not used.
7	BUZZER	O	Buzzer output.
8	POWER SAVE	I	
9	LED CS	O	LED chip select. L : Active.
10	SCLK	O	Clock for serial communication.
11	SI	I	Serial data input.
12	SO	O	Serial data output.
13	H DET	O	
14	LANC IN	I	LANC input.
15	LANC OUT	O	LANC output.
16	A/D0	I	Key reading A/D input.
17	A/D1	I	Key reading A/D input.
18	A/D2	I	Key reading A/D input.
19	A/D3	I	Key reading A/D input.
20	A/D4	I	Key reading A/D input.
21	A/D5	I	Key reading A/D input.
22	A/D6	I	Key reading A/D input.
23	AFT	I	
24	AVDD	—	UNSWD 5V.
25	AV REF	—	A/D port reference input UNSW5V.
26	SCL	O	I2C bus (clock).
27	CG $\overline{CS}$	O	Character generator chip select signal.
28	SDA	O	I2C bus (data).
29	CME $\overline{CS}$	O	AV link microcomputer chip select.
30	AVSS	—	Unswitched ground.
31	EXTAL	—	System clock.
32	XTAL	—	System clock.
33	VSS	—	Ground.
34	$\overline{RST}$	I	Reset signal in.
35	PLL CLK	O	Tuner clock signal.
36	PLL DATA	O	Tuner data signal.
37	PLL ENABLE	O	Tuner enable signal.
38	N.C.	—	Not used.
39	C+ DET	I	Canal + detection.
40	N.C.	—	Not used.
41	N.C.	—	Not used.
42	POWER FAIL	O	Power failure detect sigal input.
43	VFDP	—	-30V
44	SEG16	O	LCD segment output.
45	SEG15		LCD segment output.
46	SEG14		LCD segment output.
47	SEG13		LCD segment output.
48	SEG12		LCD segment output.
49	SEG11		LCD segment output.
50	SEG10		LCD segment output.

Pin No.	Pin Name	I/O	Function
51	SEG9		LCD segment output.
52	SEG8		LCD segment output.
53	SEG7		LCD segment output.
54	SEG6		LCD segment output.
55	SEG5		LCD segment output.
56	SEG4		LCD segment output.
57	SEG3		LCD segment output.
58	SEG2		LCD segment output.
59	SEG1		LCD segment output.
60	SEG19		LCD segment output.
61	SEG18		LCD segment output.
62	SEG17		LCD segment output.
63	N.C.	—	Not used.
64	N.C.	—	Not used.
65	N.C.	—	Not used.
66	GRID6	O	LCD grid signal.
67	GRID5		LCD grid signal.
68	GRID4		LCD grid signal.
69	GRID3		LCD grid signal.
70	GRID2		LCD grid signal.
71	GRID1		LCD grid signal.
72	TDD		UNSWD 5V.
73	TX	—	Connected to oscillator for clock.
74	TEX	—	Connected to oscillator for clock.
75	NC/VPP	—	Connected to +5V.
76	ASURA $\overline{CS}$	O	Servo/System control microcomputer chip select.
77	ASURA $\overline{RESET}$	O	System reset signal output.
78	POWER CONT 1	O	Power supply control signal output.
79	POWER CONT 2	O	Power supply control signal output to EDS.
80	CG V	I	Vertical sync. signal input.

SECTION 7 ADJUSTMENTS

7-1 MECHANICAL ADJUSTMENTS

For the mechanical adjustments, please refer to the "VHS MECHANICAL ADJUSTMENT MANUAL IV (H MECHANISM)" (9-973-623-11).

7-2. ELECTRICAL ADJUSTMENTS

See the adjusting part location diagram from on page 7-6 for the adjustment.

2-1. PREPARATION BEFORE ADJUSTMENT

2-1-1. Equipment Required

The measuring instruments used for this alignment include:

- 1) Monitor TV
- 2) Oscilloscope, dual-trace, bandwidth of 30MHz or more, with delay mode (A probe 10:1 should be used unless otherwise specified.)
- 3) Frequency counter
- 4) Pattern generator
- 5) Digital voltmeter
- 6) Audio generator
- 7) Audio level meter
- 8) Audio distortion meter
- 9) Audio attenuator
- 10) Alignment tapes

KRV-51P Part No. : 8-192-605-36

2-1-2. Equipment Connection

Unless otherwise specified, connect and adjust the measuring instruments as shown in the following diagram.

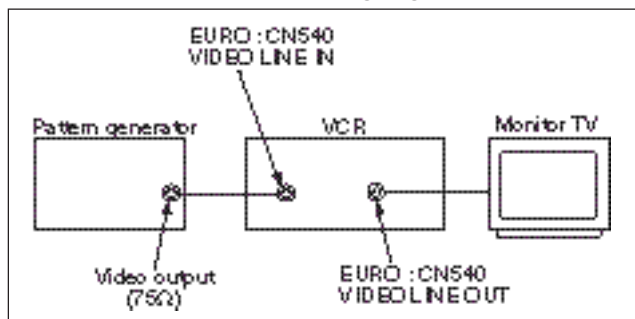


Fig. 7-2-1.

2-1-3. Input Signal Check

Video signal produced by a pattern generator is used as an adjustment signal to perform electrical alignment for this unit. This video signal must satisfy the specification.

Unless otherwise specified, place the switches and controls of this unit in the following positions:

- CHANNEL switch LINE 1

Connect an oscilloscope to the Video Input terminal. Check that the synchronizing signal of the Y signal has an amplitude of approximately 0.7V and that the burst signal has an amplitude of approximately 0.3V and its waveform is flat. And check that the level ratio of burst signal to "red" signal is 0.30 : 0.66. The video signal (color bar) used for electrical aligning this unit is shown in Fig. 7-2-2.

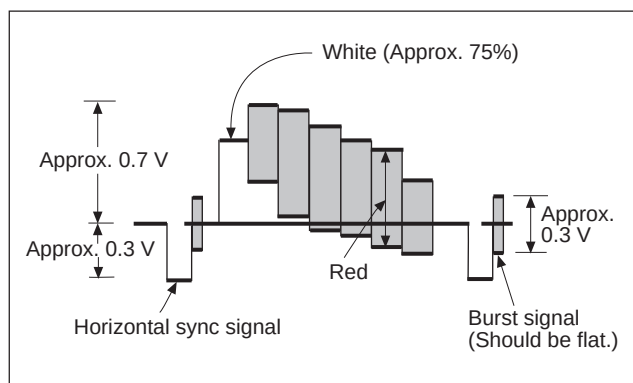


Fig. 7-2-2. Color Bar Signals of Pattern Generator

2-1-4. Alignment Tape

- Contents of KRV-51P

	Mode	Period	Video signal	Audio signal	
				Hi-Fi	Normal
1	SP	7 minutes	Color bar	400Hz (L/R)	400Hz
2		3 minutes	Monoscope		
3	LP	7 minutes	Color bar		
4		3 minutes	Monoscope		

2-1-5. Input/Output Levels and Impedance

Video input: LINE IN
EURO
Input signal: 1Vp-p, 75ohms, unbalanced, sync negative

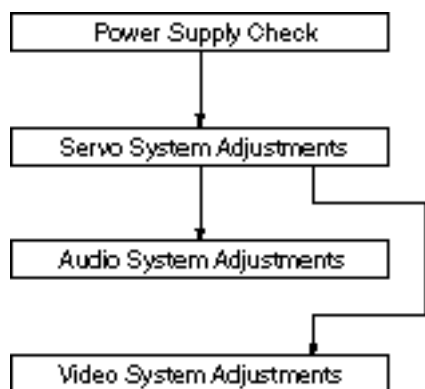
Video output: LINE OUT
EURO
Output signal: 1Vp-p, 75ohms, unbalanced, sync negative

Audio input: LINE IN
EURO
Input level: -7.5 dBs
(0dBs= 0.775Vrms)
Input impedance: more than 47 kilohms

Audio output: LINE OUT
EURO
Standard level: -7.5dBs at load impedance 47 kilohms
Output impedance: less than 10 kilohms

2-1-6. Adjustment Sequence

The adjustments should be performed in the following sequence.



2-2. POWER SUPPLY CHECK

2-2-1. Output Voltage Check (MA-286 Board)

Mode	E-E
Measuring Instrument	Digital voltmeter
SW 12V Check	
Measurement point	IC930 pin ②
Specified value	12.0 ± 0.3V
MTR12V Check	
Measurement point	CN600 Pin ⑫⑬
Specified value	12.4 ± 0.5V
SW5V Check	
Measurement point	CN600 Pin ⑰⑱
Specified value	5.0 ± 0.5V

[Check Method]

- 1) Each of these supply voltages must meet its specified value.

2-3. SERVO SYSTEM CHECK

Unless otherwise specified, set the switches to the following positions.

- **CHANNEL** switch LINE
- **TAPE SPEED** switch SP

2-3-1. RF Switching Position Adjustment (MA-286, RP-217 Boards)

[Adjustment Purpose]

To adjust the link of the A-ch and B-ch of the tape playback outputs. To make the unit compatible with other tapes and units. If this specification is not satisfied, the link will appear on the screen and the screen will be disrupted, etc.

Mode	Playback
Signal	Alignment tape: SP color bar portion
Measurement point	CH1: Video LINE OUT (EURO) CH2: CN261 pin ② (RF SWP)
Measuring instrument	Oscilloscope
Specified value	$6.5 \pm 0.5H$ ($416 \pm 32 \mu\text{sec}$)

[Adjustment Method]

- 1) Short-circuit between CN261 pin ⑤ and pin ③ on RP-217 board for about 1 second to activate the RF switching position adjustment mode.
- 2) Check that "ADJ-RF" is indicated on FL display.
- 3) Using the channel + and - buttons, adjust to $416 \pm 32 \mu\text{sec}$ ($6.5 \pm 0.5H$).
- 4) Press the PAUSE button.
- 5) Press the EJECT button.

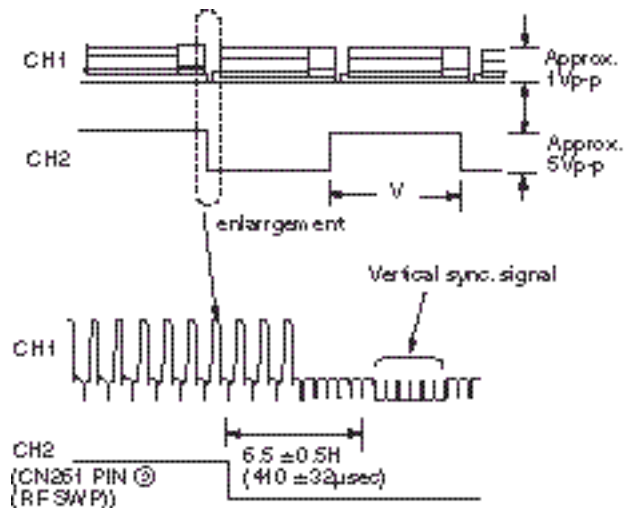


Fig. 7-2-3.

2-4. VIDEO SYSTEM CHECKS AND ADJUSTMENT

For the video system checks, follow the checking procedures given below as a rule. The color bar video signal supplied from the pattern generator is used as the video input signal for the video system adjustment of the recording mode. Check that the signal satisfies the specified value designated in the "Check of input signal" (Fig. 7-2-2)

Unless otherwise specified, set the switches to the following positions.

- **CHANNEL** switch LINE 1
- **TAPE SPEED** switch SP

[Checking Sequence]

- 1) X'tal OSC Check
- 2) SYNC AGC Check
- 3) White clip/Dark clip Check
- 4) Recording Y Level Check
- 5) Recording Chroma Level Check
- 6) Playback Level Check
- 7) VCO frequency adjustment

2-4-1. X'tal OSC Check (MA-286 Board)

Mode	Playback
Signal	Alignment tape: SP Color bar portion
Measurement point	IC201 pin ⑤⑥
Measuring instrument	Oscilloscope and Frequency counter
Specified value	$4,433,619 \pm 96\text{Hz}$

Note: A frequency counter should be connected through a buffer amplifier (oscilloscope, etc.) having a high impedance and a low capacitance.

[Check Method]

- 1) Check that the oscillation frequency satisfies the specified value and that the oscillation voltage is $500 \pm 200\text{mVp-p}$.

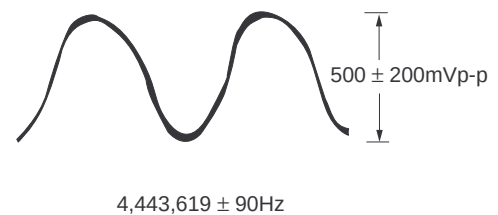


Fig. 7-2-4.

2-4-2. SYNC AGC Check (MA-286 Board)

Mode	E-E
Signal	Color bar
Measurement point	IC201 pin ③⑧
Measuring instrument	Oscilloscope
Specified value	$A=2.10 \pm 0.14V_{p-p}$

[Check Method]

- 1) Check that the Video signal level (A) satisfies the specified value.

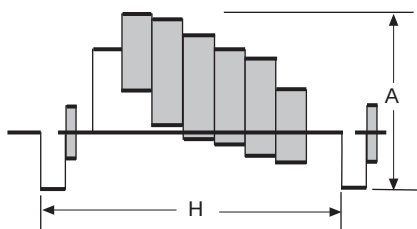


Fig. 7-2-5.

2-4-3. White Clip/Dark Clip Check (MA-286 Board)

Mode	E-E
Signal	Color bar
Measurement point	IC201 pin ③⑦
Measuring instrument	Oscilloscope
Specified value	White clip : $190 \pm 15\%$ Dark clip : $52.5 \pm 5\%$

Connect a resistor of 3.3Ω between IC201 pin ④② and GND.

[Check Method]

- 1) Check that the white clip level is $190 \pm 15\%$ to the white (100%) level.
- 2) Check that the dark chip level is $52.5 \pm 5\%$ to the white (100%) level.

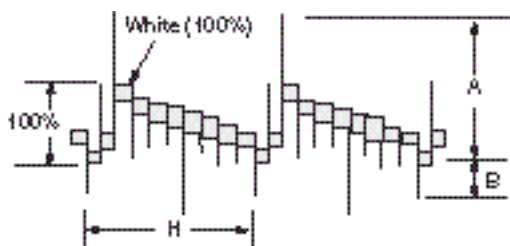


Fig. 7-2-6.

2-4-4. Recording Y Level Check (MA-286 Board)

Mode	E-E
Signal	No-signal
Measurement point	IC201 pin ①⑧
Measuring instrument	Oscilloscope
Specified value	$A=250 \pm 50mV_{p-p}$

[Check Method]

- 1) Check that the recording RF signal satisfies the specified value.

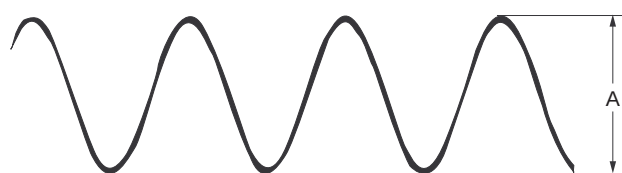


Fig. 7-2-7.

2-4-5. Recording Chroma Level Check (MA-286 Board)

Mode	Recording
Signal	Color bar
Measurement point	IC201 pin ①④
Measuring instrument	Oscilloscope
Specified value	$A=380 \pm 40mV$

[Check Method]

- 1) Confirm the amplitude of recording chroma level becomes the specified value.

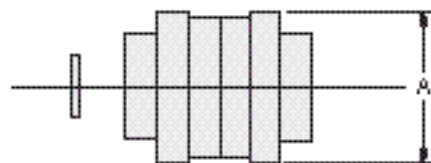


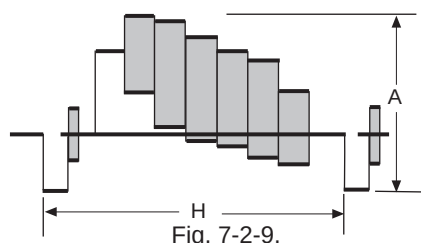
Fig. 7-2-8.

2-4-6. Playback Level Check (MA-286 Board)

Mode	Playback
Signal Alignment	Alignment tape : SP mode color bar portion
Measurement point	Video LINE OUT terminal
Measuring instrument	Oscilloscope
Specified value	$A=1.00 \pm 0.02V_{p-p}$

[Check Method]

- 1) Check that the playback level satisfies the specified value.

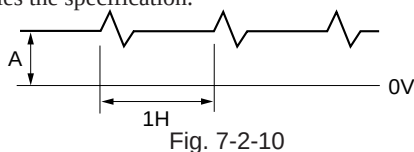


2-4-7. VCO Frequency Adjustment (MA-286 Board)

Mode	Playback
Signal	Alignment tape : SP mode color bar portion
Measurement point	IC500 pin ②⑥
Measuring instrument	Digital voltmeter
Adjustment element	CT500
Specified value	$A=2.4 \pm 2.5V_{dc}$

[Check Method]

- 1) Adjust CT500 until DC output level at IC 500 pin ②⑥ (F. C) satisfies the specification.



2-5. AUDIO SYSTEM ADJUSTMENT

- For the adjustment of the audio system, perform in the SP mode if there is no special notes. Use the alignment tape.

[Connecting Instruments]

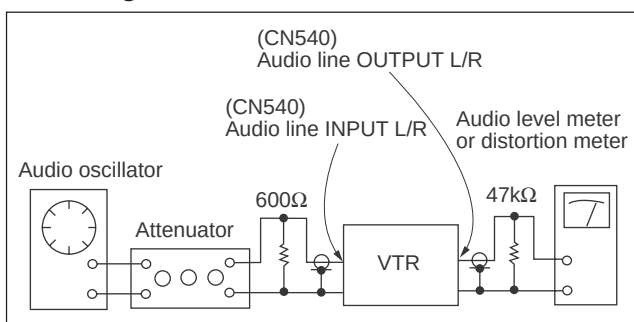


Fig. 7-2-10.

- Adjust in the SP mode if there is no special indications.
- Perform the adjustment setting the switch on the following positions.
- **CHANNEL** switch LINE 1

[Adjustment Method]

1. ACE head adjustment.....Refer to the VHS mechanical adjustment manual IV.
2. E-E output level check
3. Overall Output level and distortion factor check
4. Overall noise level check.

2-5-1. ACE Head Adjustment

Refer to the “VHS mechanical adjustment manual IV” (9-973-623-11).

2-5-2. E-E Output Level Check

Mode	E-E
Signal	400Hz, $-7.5dBs$: IC540 pin ⑤ (②)
Measurement point	CJ540 L/R
Measuring instrument	Audio level meter
Specified value	$-7.5 \pm 2dBs$

() : R-ch

[Check Method]

- 1) Input signal of 400Hz and $-7.5dBs$ to the CN540 pin ⑤ (②).
- 2) Check that the audio output level is $-7.5 \pm 3dBs$.

2-5-3. Overall Output Level and Distortion Factor Check

Mode	Self-record playback
Signal	400Hz, $-7.5dBs$: IC540 pin ⑤ (②)
Measurement point	IC540 pin ③ (①)
Measuring instrument	Audio level meter and Distortion meter
Specified value	Playback Level: $-6.3 \pm 3dBs$ Distortion: 4.0% or less

() : R-ch

[Check Method]

- 1) Input signal of 400Hz and $-7.5dBs$ to the audio input.
- 2) Record signal.
- 3) Playback the recorded portion.
- 4) Check that the output level is $-6.3 \pm 3dBs$.
- 5) Check that the distortion factor is 4.0% or less.

2-5-4. Overall Noise Level Check

Mode	Self-record playback
Signal	No signal (Insert a shorting plug into the Audio LINE IN terminal)
Measurement point	IC540 pin ③ (①)
Measuring instrument	Audio level meter (IHF-A weighing filter is used)
Specified value	$-45.5dBs$ or less

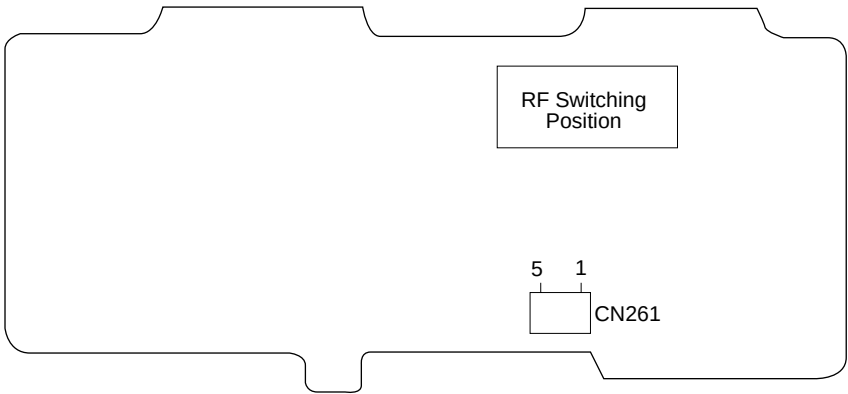
() : R-ch

[Check Method]

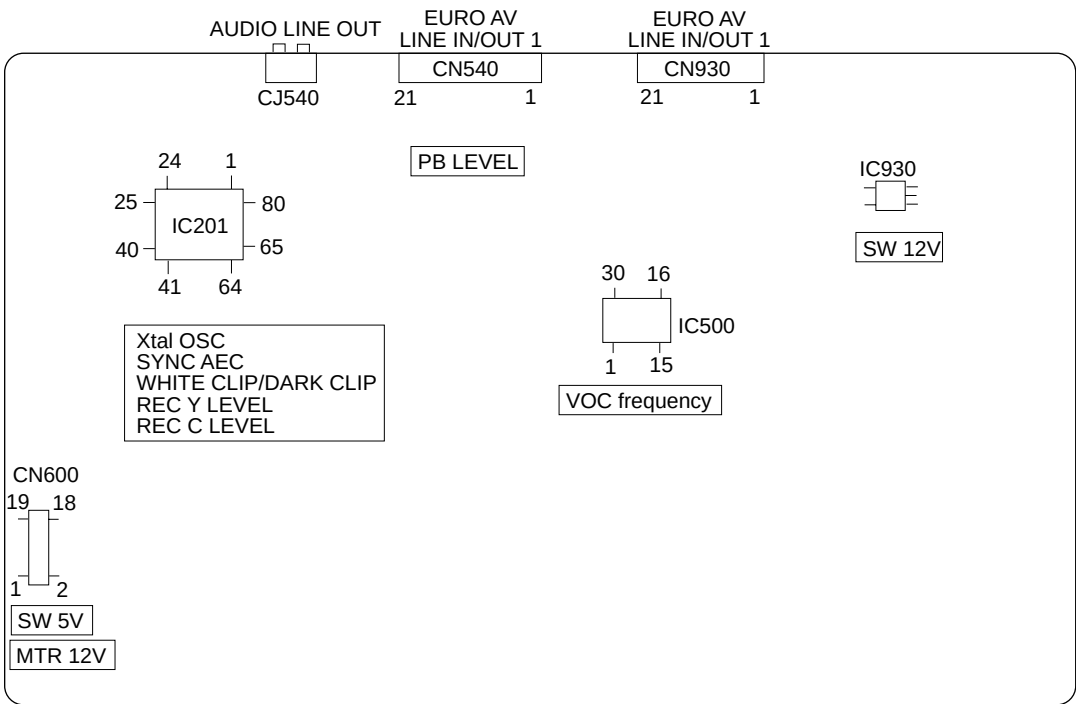
- 1) Record.
- 2) Playback recorded portion.
- 3) Check that noise level is $-45.5dBs$ or less.

2-6. ADJUSTMENT PARTS LOCATION DIAGRAM

RP-217 BOARD (Comductor side)



MA-286 BOARD (Comductor side)



**SLV-E325EG/E475EG/E570EE/E570EG/E715B/E717VC/E720B/E720BZ/E720EE/
E720EG/E720EX/E720NC/E720NP/E720UX/E720VC/E720VP/E725NC**